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THE UNIVERSITY OF ALBERTA

A PERCEPTUAL APPROACH TO THE IDENTIFICATION OF FOREGROUND INFORMATION IN NARRATIVE DISCOURSE

BY

Karen M. Tjosvold (C)

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
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IN

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A PERCEPTUAL APPROACH TO THE INDENTIFICATION OF FOREGROUND INFORMATION IN NARRATIVE DISCOURSE

submitted by

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in partial fulfillment of the requirements for the degree of:

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in Psycholinguistics

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ABSTRACT

This thesis examines the functional claim that importance (or foregrounding) is marked in narrative. The study deals only with the foregrounding of visual information. Visual importance is defined as movement or change in the visual field.

A videotape was shown to 24 subjects. Half saw the video with the soundtrack and the other half saw it without the soundtrack. They were then asked to give a written description of what had happened in the video. It was expected that the group that had seen the video without the soundtrack would do more visual foregrounding since they would have more perceptual resources available to devote to the visual aspect of the video than the group that both saw and heard the video.

All verbal units specifying movement or change were identified and the two condition groups were compared. The hypothesis that the 'without soundtrack group' would provide more visual foregrounding was not supported. A Response Coincidence Analysis together with a Cluster Analysis identified two groups within the subjects that did respond differently with respect to foregrounding. Also it was found that the foreground, as identified through movement was marked as distinct from the background in tense, aspect, and mood, use of particles, and clause type. In the foreground there was more use of the present tense and main clauses, and in the background there was more use of the progressive aspect, irrealis mode, and copula verbs.

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1. INTRODUCTION

1.1 Introduction

This thesis examines the functional claim that importance as perceived by the speaker is marked in discourse using various morphosyntactic (structural) devices (Reid, 1977). That is, this view attempts to account for the structure of language from within a communicative paradigm. An extension on this claim is that not only may importance be marked by a speaker in discourse, but levels of importance may also be distinguished from one another (Jones & Jones, 1979).

For example, Reid (1977) claims that in French, the simple past tense is used with 'high focus' verbs (where focus equals importance). Thus, according to Reid, in French tense marks importance (or as it is often referred to in the literature, foregrounding). The same kinds of claims have been made about the marking of levels of importance (Bishop, 1979; Jones & Coleman, 1979; MacArthur, 1979; Jones & Nellis, 1979) where tense/aspect/modality, particle use, or clause type or a combination of these morphosyntactic devices may mark various degrees of importance as perceived by the speaker.

Although importance may be marked in all genres of discourse, this thesis will focus on narrative discourse. The major claim will be that it is the speaker's perception of the situation that will influence what s/he marks as important. Unfortunately, in many genres of discourse it is virtually impossible to study the speaker's perception of the situation. In narrative, however, it is possible to set up situations in which the perceptual input is controlled and a number of people may be presented with the same perceptual input, and their reports analyzed and compared. This study will focus solely on visual perception. This provides a motivation for the study of narrative here as opposed to other discourse genres.

In order to test the claims outlined above it is necessary to be able to identify what is important to the speaker, independent of the markers used. Then, it is

possible to look for correlations between the information type and the structure of the language used to convey it.

1.2 Perceptual Motivation

In narrative, what is usually reported is something that actually happened. In other words, before the speaker can describe the situation s/he must have already experienced it. In this context, one may think about the kind of information that is likely to be marked as important or foregrounded. If the approach of Shaw and Hazelett (1986) is taken that "... every perception should be considered a function of the same cognitive system whose primary mission is to detect meaningful information ..." (p. 48), then it seems reasonable to suppose that this 'meaningful' information will be important to include in the narrative. More specifically, the hypothesis to be tested in this thesis is that movement or change in the visual array is 'salient' information and more likely to draw the attention of the viewer, and hence more likely to be perceived as important (and marked as such) when being expressed linguistically. At this point it will be useful to clarify a few terms. The term 'meaningful' will not be used henceforth. Rather 'salience' will refer to the information in the visual array to which attention may be drawn (that is, the change or movement). 'Importance' or 'foreground' will be used to refer to that salient information that the language producer includes in his/her description of the situation. In this sense, the salient information in the visual array is seen to be foregrounded or important to the language producer only if it is present in the description. Thus, the notion of 'salience' here implies only the potential to be foregrounded.

It is not unreasonable to propose that movement or change is 'salient' information or attention grabbing. Infants will respond to movement at or soon after birth and attempt to track a moving object with their eyes a few days after birth (Haith, 1966). It would seem that from the beginning of life, the perception of

movement plays an important role in vision. Other perceptual studies based on studies of eye fixation and movement (Goldstein, 1984) have shown that the sensory system responds more to change than to any constant stimulus. This is also apparent from habituation studies: individuals from birth will lose interest if a stimulus is constant or the same over time. As soon as some change occurs (and this could include movement), attention is again focussed on the stimulus (Bower, 1982).

However, foregrounded information does not consist of a verbal unit (coding movement) in isolation. The speaker must also specify the objects in the visual field that are involved in a particular change. Although the movement itself is central with respect to attentional allocation, it is uninterpretable without some sort of context. Even though the objects involved in a movement are independently less central than the movement itself, they become more central in that they are involved in some change. The relationship is interdependent. The verbal unit signifying change (that is, the foregrounded verb representing perceptual salience), plus the objects involved in the change (as specified by the narrator) will be said to make up an event. In this way an event is a subjective notion defined by the speakers themselves rather than some objective notion attributed to the stimulus. The definition of event in this respect includes the definition of foregrounding. Therefore, *any mention of an event presupposes that it is foregrounded information within this perspective*. Everything else in the narrative is defined as background information of which there may be many types. However, background information will not be discussed within the context of this study.

1.3 The Notion of Importance

Some of the first operational definitions of foreground relied on the notion of temporal sequencing, in which the foreground actions in the narrative were the ones that reflected the events in the real world. Using this operational definition,

foregrounded events included only those that did not overlap in time. In other words, the foreground consisted of events occurring in a set sequence (and mirrored as such in the language) with no temporal overlapping while the background included more continuous events that were occurring at the same time as the foreground. However, at some point in the literature this definition became confused with the notion of importance (perhaps because the two notions are confounded, to some extent). Some authors started using importance as their operational definition of foreground. Although the two notions are confounded, theoretically they are different concepts and, therefore, one must choose one or the other approach. This paper discusses the notion of foreground as being represented by important information.

There are pitfalls associated with the definition of foreground in this way. One of the most serious is that the notion of importance is subjective and hence a researcher cannot go through a narrative created by someone else and choose the important parts.

The present study attempts to overcome this problem. By treating only those 'salient' movements *that get mentioned* by the speaker as the important or foregrounded events, the speaker defines his/her own foreground. Again, this approach assumes that if the movement is mentioned then it is important to the speaker. In this way, different foregrounds for different speakers may be identified. This approach, therefore, is subjective in that it allows for individual variation.

Also, as previously mentioned, certain papers have suggested that levels of importance may be marked in discourse (Jones & Jones, 1979). Jones and Jones claim that up to six levels may be evident in a language and that every language has at least three levels. If this is the case, then out of the foreground events identified for each subject, how may the degree of importance for a given event be predicted?

One possibility might be to ask each of the subjects to place their individual foregrounded events on a scale from least to most important. However, in this case, it is not practical to do so because the foreground events must be identified before this task may be performed.

Rather, what is done here is a group measure is taken which assumes that the more subjects that mention a particular event, then the more important this event must be *to the group*. In this way, a continuum may be identified which places events on a point from least to most important. However, it must be kept in mind that this approach cannot say anything about the individual perception of importance, but rather the results are only meaningful for the group.

It might be noted that a somewhat different approach to levels of importance is taken here as opposed to the traditional one. The traditional notion (Jones & Jones, 1979) suggests that there is a continuum that runs from foreground (most important) to background (least important) with various levels of importance in between. The approach taken here suggests that a distinction may be drawn between foregrounded and backgrounded information. They are not on a continuum of importance. However, within these two groups continua may exist. So within the clauses that are seen to be foregrounded clauses (e.g., those that specify a movement), there will be some that are more important and some that are less important with various levels of importance in between. The same may go for the backgrounded information although it will not be discussed here.

1.4 Aim of the Study

A study was conducted which attempted to show that the perception of movement or change may be reflected through various markers in language due to its greater salience. As well, the study attempted to discover whether there are lev-

els of foreground or salience in a narrative. This too, may be signalled by the speaker.

1.5 Overview

With these claims in mind the following chapters will be devoted to motivating them, testing them, and discussing the results:

Chapter Two will discuss previous literature pertinent to the marking of importance in discourse and its shortcomings. Based on these shortcomings, the motivation for the present study will be offered.

Chapter Three discusses the methodology used to test the claims made: the experimental procedure and the analytic procedure.

Chapter Four presents the results of the analysis plus a discussion of those results as relates to the initial claims.

Chapter Five concludes this study by giving a general overview of the hypotheses and the results, and suggesting topics for further study.

2. LITERATURE REVIEW

2.1 Introduction

This literature review will focus on some of the prominent papers that relate to the notion of the marking of significant information in narrative discourse. The initial papers that dealt with information marking in discourse defined 'narrative units' using some concept of temporal sequencing as an operational definition (Labov & Waletzky, 1967). In this view 'narrative' was seen as the information in the discourse that reflected the real-world representation of events. Due to problems with the theory itself as well as difficulties in the conceptualization of the theory, this view will not be dealt with in this literature review. Rather, another group of papers will be discussed that defined foreground by claiming that it was the significant or salient part of the narrative and that certain morphosyntactic markers were present specifically to highlight this important information (Reid, 1977). It was also recognized fairly quickly that the distinction between information types was not necessarily a bipartite one. There could be levels of importance in a narrative which could also be marked as distinct morphosyntactically (Jones & Jones, 1979).

These papers suggest that the ways in which importance or significance is marked in discourse are functional. In other words, importance marking is a reflection of some higher level communicative need. Dik (1980) provides an outline of the reasons for, and requirements of, a functional explanation of language:

> In terms of the well-known distinction between syntax, semantics, and pragmatics, the functional approach to language regards pragmatics as the all-encompassing framework within which semantics and syntax must be studied. It regards semantics as subservient to pragmatics, and syntax as subservient to semantics. Syntax is there in order to allow for the construction of formal structures by means of which complex meanings can be expressed; and complex meanings are there for people to be able to communicate with each other in subtle and differentiated ways.
>
> Functional Grammar is a theory of syntax and semantics conceived of within the framework of this functional paradigm. This explains

> why this theory will try, wherever possible, to explain syntactic and semantic principles in terms of the pragmatic purposes and requirements of verbal interaction. In other words, *pragmatic adequacy* will be one of the standards in terms of which a linguistic theory or a linguistic description will be evaluated. From this it follows that *psychological adequacy* will be another such standard. That is, linguistic theory and description should be compatible with what we know about human beings' psychological capacities.
>
> A third criterion for evaluating a linguistic theory is *typological adequacy*: such a theory should be capable of providing adequate grammars for typologically quite different languages, while at the same time accounting for the similarities and differences between these languages in a systematic fashion (p. 2).

The following discussion will analyze these papers that claim that importance or levels of importance are marked (Reid, 1977; Jones & Jones, 1979; Bishop, 1979; MacArthur, 1979; Jones & Coleman, 1979; Jones & Nellis, 1979) with the view that syntax is motivated by some pragmatic notion, in this case, importance.

Unfortunately many of the papers discussed suffer from three problems:

1. There is a serious lack of thoroughness evident in the studies in two ways:
   a) there are no statistics provided on the results,
   b) there is a lack of an operational definition for foregrounding in the data.
2. Problem 1b above, lack of an operational definition of foregrounding, leads to another fundamental problem: what is important is subjective. Since the authors of these papers neglect to tell how foregrounded information is recognized in the data, one must assume that they are using their own personal judgements of significance to define foreground in the data. Unfortunately, since importance is subjective, they have no way of knowing whether or not the narrator considered the same events to be important. And from a functional point of view, it would be the actions that the narrator thinks are significant which would be marked.

3. A third problem is that the data are often not representative of the language speaking community. In many cases, it seems that data are taken from one speaker.

Fortunately, some later papers recognized these inadequacies and attempted to deal with them (Tomlin, 1985; Bellan, 1988). These later papers were empirically more rigorous but the solutions were still lacking in some way. This review will discuss these shortcomings in more detail and discuss some ways to overcome them, thus motivating the study described in Chapter 3.

2.2 Primary Definitions

2.2.1 Importance in Narrative

Although the temporal sequencing view (Labov & Waletzky, 1967; Grimes, 1975; Hopper, 1979; Hopper & Thompson, 1980) was the first to suggest that different types of information could be present and marked in narrative in various ways, the claim that will be discussed here is that significant or important information is what is marked as foreground information. In one of the first papers to suggest that importance was marked in narrative, Reid (1977) claims that, in French, the simple past tense marks information that is in high focus and the *imparfait* marks information that is in low focus. As Reid says:

> The two tenses are doing the same thing in a written narrative that we all do orally in telling a story, namely raising our voice for the important events and dropping it for the less important ones (p. 3).

In the following example from "The Necklace" by de Maupassant, provided by Reid, the high focus verbs are in capitals and the low focus verbs are in italics:

> Le jour de la fete ARRIVA. Mme Loisel EUT un succes. Elle *etait* plus jolie que toutes, elegante, gracieuse, souriante et folle de joie. Tous les hommes la *regardaient*, *demandaient* son nom, *cherchaient* a etre presentes. Tous les attaches du cabinet *voulaient* valser avec elle. Le ministre la REMARQUA.

> The day of the party ARRIVED. Mme Loisel WAS a success. She *was* prettier than all the others, elegant, gracious, smiling and radiant. All the men *admired* her, *asked* her name and *requested* an introduction. All the young officials *wanted* to dance with her. The minister TOOK notice of her (p. 61).

According to Reid, the verbs 'arrived', 'was' and 'took' are all in high focus in this passage and are therefore marked by the simple past tense. Reid is in some sense claiming that a certain type of information (in this case high/low focus) is encoded by tense in French and, therefore, that tense is signifying focus.

2.2.2 Levels of Importance

With the suggestion that importance was marked in narrative, another insight was gained: the distinction between information types is not necessarily a bipartite one. There may be levels of importance in discourse. This notion was first suggested by Jones and Jones (1979) in a volume edited by Linda Jones on Meso-American languages. In this volume a number of papers appear in support of their hypothesis (Bishop, 1979; Jones & Nellis, 1979; Jones & Coleman, 1979; MacArthur, 1979). These papers will also be discussed. Jones and Jones (1979) initially proposed the multiple levels approach:

> ... we propose a structure of information in discourse which includes multiple degrees, or levels of significant information, any of which may be grammatically marked in a given language (p. 5).

They assert that six levels may potentially exist and that every language marks at least three of the following levels:

Most significant	peak
	pivotal events
	backbone events
	ordinary events
	significant background
Least significant	ordinary background

Using this as an outline, the simplest language would code peak, backbone and one level of background, the so-called 'basic three level structure'. Other languages could code up to all six levels.

Bishop (1979) provides evidence from Totonac narrative of six levels of significance, supporting Jones and Jones' multiple levels hypothesis. She suggests that the level of peak may be marked through a variety of signals, summary or backbone is marked by the particle *tuncan* plus mainline tense (the preterite), mainline events are marked by the preterite tense, suppressed mainline is marked by the mainline tense in dependent clauses, crucial supportive material is marked by a supportive tense (imperfect) plus the suffix *-tza* and finally, ordinary supportive material is marked by the imperfect tense. She claims that this represents the hierarchy of importance from most to least important respectively in Totonac. As an example, in the following passage provided by Bishop, the mainline events and backbone events are marked in the ways specified above:

La' laktzi'-lh serpiente ma' xanin
And he see it-PRET serpent it lie PRES dead

La' chu tuncan mamakosu-lh ix-cuxtalh
And so then he cause throw it-PRET his-bag (p. 37).

In this passage 'see' and 'cause throw' are both marked with the mainline preterite tense. However, in Totonac, backbone is marked by *tuncan* plus the mainline tense according to Bishop. In the preceding passage 'cause throw' is preceded by *tuncan* and is therefore highlighted mainline (or backbone) information and hence more significant on the importance hierarchy than 'see'. Each level on the hierarchy is marked in some such manner.

Jones and Coleman (1979) also suggest that five levels of importance exist in Kickapoo narrative and are marked through tense and mood:

> We hope to demonstrate that *one important function of these various modes and tenses in Kickapoo is to indicate the relative significance of a*

> *chunk of information within a narrative.* There appear to be a number of levels of relative siginificance of information in Kickapoo narrative, *each level being distinctly marked by a particular mode-tense combination* (p. 75).

In Kickapoo, highly significant information that is important thematically is coded by the conjunct third aorist. The next level down on the importance hierarchy is that of peak. This consists of very important events, the turning point or exciting actions. This level is marked by the independent first aorist. The next level is that of the event-line which carries most of the actions and events. It is marked by the conjunct second aorist. Some speakers mark a level between the event-line and background. This information may consist of either routine events or significant background. It is marked by the conjunct first aorist. Finally, the lowest level of significance in Kickapoo is that of background which may describe setting, participants, and mental/emotional states and is marked by the independent first aorist.

Of interest here is the fact that both the levels of background and peak are marked in the same way (independent first aorist). Jones and Coleman seem to feel that this does not constitute a problem since the levels are so far apart on the hierarchy that the listener would know which level was being specified.

MacArthur (1979) analyses the role that aspect plays in various types of discourse in Aguacatec. According to MacArthur definite-event narratives recount "... events that either definitely took place or are conceived of as having taken place in the past" (p. 100). In this type of narrative discourse, MacArthur maintains that mainline or important information is marked as distinct from background information through aspect. In addition there may be a distinction made within the foregrounded information between events of primary and secondary interest. Through the addition of the affix *-tz* to primary/secondary events or to backgrounded information (specifying extra importance), two more levels are added to the hierarchy (backbone and crucial background) resulting in a total of five levels of importance

that may be marked. The five levels of importance distinguished in Aguacatec definite-event narratives are summarized as follows:

backbone -primary or secondary events marked by *-tz*
primary -0 aspect (plus certain finite verb forms)
secondary -participle forms *-e'n*/Vl
crucial background-background plus *-tz*
background -other aspect and clause types

The following is an example from MacArthur in which secondary events are marked by the past participle (*e'n*) :

Ma *yi* *cw-e'n* *0-xmay-il*
But/then when going down-PTC his-seeing it-NOM

jun *c'oj* *nin* *xbu'k.*
one mask and costume (p. 102-3).

In the excerpt above, the verb 'going down' is marked with the past participle (PTC) *-e'n*. According to MacArthur, this gives it the status of a secondary event in Aguacatec.

Jones and Nellis (1979) focus their discussion on one particle (*na'a*) in Cajonos Zapotec (CZ). They claim that "... the particle *na'a* functions generally to highlight what is important in a discourse from a speaker's perspective ... In narrative discourse, apart from dialogue, *na'a* functions to highlight important events, agents, props, and time junctures" (p. 192). What is of interest to us here is the use of *na'a* to highlight events. In this paper, Jones and Nellis only discuss levels of significance as pertains to the particle *na'a*, which they claim marks pivotal events.. An example of na'a marking a pivotal event in CZ follows:

I went to her (the old woman's) house (being drunk).
I say to her (why did she lie to my wife?).
I did *na'a* what I could (referring to her foot).
I pulled her foot.
I felt sorry for her (because she was old).
I did nothing to her (p. 198).

In the above passage, according to Jones and Nellis, the pivotal event is when the foot is pulled as represented by the verb 'did'. According to Jones and Nellis 'did' here is the most crucial within this group of events.

2.2.3 Marking of Peak

Of particular interest to many is the marking of peak, or the MOST important information in the narrative. Longacre and Levinsohn (1978) suggest that the highpoint (or peak) of a story may be marked in English in five ways:

1. rhetorical underlining achieved through paraphrase and repetition,
2. a concentration of participants,
3. heightened vividness attained through tense shifts, person shifts, genre shifts, or onomatopoeia,
4. change of pace through variation in size of units or fewer transition signals,
5. change of vantage point or orientation.

Through the use of a combination of these strategies, the narrator may specify the most crucial information to the listener or reader.

Jones and Jones (1979) also take a special interest in the level of peak, apart from the other levels of importance. They define peak as "... the single most significant event or sequence of events in a narrative ... Peak is the highest level of significant information in a narrative, higher than pivotal events" (p. 18). Jones and Jones claim that, as outlined in Longacre and Levinsohn (1978), in some languages such as English, speakers use a 'bag of tricks' or in other words a number of strategies for marking peak. However, they also hypothesize that other languages have a preferred device for marking peak. Kickapoo is one language that marks peak through the use of a preferred device. When the peak occurs, the tense/mode

changes to the independent first aorist, whereas preceding the peak, the tense/mode is in the conjunct second aorist. Jones and Jones suggest that all languages have some way of marking peak, be it a bag of tricks or a preferred device.

Longacre (1985) claims that, in narrative discourse, peak may be associated with two things. First, the climax of the narrative may be marked in some way. Longacre defines the climax as "... the point of maximum tension and confrontation in a story" (p. 84). The second notion that peak may be associated with is the denouement which Longacre defines as "... a decisive event that makes the resolution of the plot possible" (p. 84). Longacre tries to narrow down the marking of peak for these two notions to two methods:

1. by packing the event-line,
2. by slowing the camera down.

In Ga'dang, peak is marked by packing the event-line. Longacre cites Ga'dang data from Walrod (1977) in which during most of the text, there is an average of one verb to seven non-verbs. However, once the peak is reached this drops to one verb for every three non-verbs. Walrod (1977) suggests that something called 'maximal deletion' is going on at the peak at which point overt subjects and objects may be suppressed, there may be a loss of conjunction and formal sequence signals, and an omission of locational, temporal, and manner expressions. Through maximal deletion in Ga'dang, peak is realized by packing the event-line with actions and leaving out other information.

The second way of marking peak is by slowing the camera down. Longacre discusses this strategy in relation to Totonac using data from Bishop (1979). In Totonac there is a tendency for 'wordiness' at the peak of the story (i.e., repetition; long, complex sentence structure, etc.). The same amount of action is reported as in the rest of the narrative, just in greater detail.

As well, a morphosyntactic marker may be used to mark peak either alone, or in collaboration with one of the above strategies. Longacre cites Waltz (1976) and some data from Guanano in which a discourse particle *juna* (finally) occurs with great frequency at the peak. Also onomatopoeia and nominalization may be observed during the peak in Guanano discourse.

2.2.4 Summary of Ways to Mark Importance

So far in this review we have discussed the discourse marking of importance, levels of importance, and peak. It will be useful at this point to briefly recap the ways in which these information types may be marked. Generally, it would seem that three major ways have been suggested to code importance or significant (peak will be discussed separately).

The first is through the tense/aspect/mood (TAM) system in a language. The reason why these are discussed as one here is because often they are inextricably woven together. The papers in which this is illustrated are Reid (1978) discussing tense as a marker of importance (high focus) in French, Jones and Coleman (1979) who say that tense and mood may signal certain levels of importance in Kickapoo, and Jones and Jones (1979) who discuss the marking of importance through aspect in Lachixio Zapotec, mode/tense in Kickapoo, tense in Totonac, and aspect in Rabinal Achi. Bishop (1979) also notes that in Totonac tense is a way of marking certain levels of significance. Finally, MacArthur (1979) notes that aspect is used to mark significance in Aguacatec.

The second way of marking importance in languages, as specified in the above papers, is morphologically through the use of a particle or an affix. Jones and Nellis (1979) discuss the use of the particle *na'a* to mark pivotal events in Cajonos Zapotec. Bishop (1979) also notes that in Totonac crucial supportive material is marked by the supportive tense plus the suffix *-tza*. As well, in Totonac, backbone is

marked by the mainline tense preceded by the particle *tuncan*. Finally, MacArthur (1979) reports that is Aguacatec, the addition of the suffix *-tz* may mark primary or secondary events as backbone, and regular background as crucial background.

Finally, repetition or paraphrase may be used to signal levels of importance in narrative. Jones and Jones (1979) claim that this strategy is evident in Kickapoo to mark pivotal events, and in Rabinal Achi also to mark pivotal events.

As well, there are certain ways in which peak (the highest level of importance) may be marked. Five ways in English are best summarized by Longacre and Levinsohn (1978):

1. rhetorical underlining
2. concentration of participants
3. heightened vividness
4. change of pace
5. change of vantage point.

Longacre (1985) adds two more strategies to this list:

1. packing the event-line (Ga'dang)
2. slowing the camera down (Totonac and Hebrew)

As well, Longacre notes that onomatopoeia and nominalization may also mark peak (Guanano). Finally, Jones and Jones (1979) claim that in Lachixio Zapotec sentences become longer and more complex at peak.

2.3 Problems

Although all of the above papers may have been discussing a valid phenomenon, each one suffers from a number of problems. Three major problems will be discussed in this section:

1. lack of explicitness or thoroughness,
2. subjectivity of importance,

3. unrepresentative data sample.

2.3.1 Lack of Explicitness

In any scientific paper, explicitness is of prime importance because one wants the reader to understand exactly what was done and why. If this is not accomplished, then the conclusions drawn from an experiment must be viewed skeptically. Of absolute necessity in any scientific pursuit is the opportunity to let others judge for themselves, based on the information given, whether or not the conclusions of a study are valid. This is not possible if all the necessary information is not provided. A number of the papers discussed thus far are guilty of a lack of explicitness. There are two ways in which this may be the case:

1. a lack of statistics,
2. no operational definitions.

Each of these will be discussed in greater detail.

Firstly, none of the papers above, with the exception of Reid (1977), provides any figures or statistics regarding their results. Each paper is concerned with providing examples of data from languages in which some sort of importance marker is presumed to be in evidence. They never give figures regarding how often a particular marker may be observed to code importance and whether this form ever occurs elsewhere. One example comes from Jones and Coleman (1979) in which tense and mood in Kickapoo are said to mark levels of importance in the narrative. They say "material in the conjunct conjunctive mode with the second aorist tense ... carries the bulk of the action and events. Material in this mode-tense combination might be called the EVENT-LINE of a narrative text" (p. 77). They then give the following example:

Ee-naan-akeci *kiiaawaake-ta*
CONJ2-fetch-11,3 CONJPART 3rd carry one around-(3)

Jones and Coleman then state that the verb "fetch" is on the event-line by virtue of its marking by the conjunct second aorist. We are expected to believe that every time the conjunct second aorist appears in Kickapoo it will be there to mark a verb on the event-line. One begins to get a sneaking suspicion that the reason that they do not provide any counter examples is due to the fact that they have no way of identifying the levels of importance independent of the markers. At the very least they could be allowing the morphosyntactic markers to partially guide their judgements of importance. In any case, where a morphosyntactic device is suggested as a marker of some level of importance, no frequency counts are provided. Therefore, no counter-examples are ever discussed.

This leads into the second problem that stems from a lack of explicitness: none of these papers provides operational definitions for foregrounded information (or importance). Data are provided in which the authors claim that significance is marked but they have not told us how this information type is identified independent of the marker being discussed.

Reid's (1977) example from "The Necklace", provided earlier, suggests that certain clauses may be in high or low focus which is reflected through tense. He asserts that:

> The first two sentences, both in HIGH FOCUS, state the topic of the paragraph ... Then it drops to LOW FOCUS for a development of that topic ... (p. 61).

However, Reid never tells the reader why we may assume that the first two sentences are in high focus apart from the fact that they are marked by the simple past tense. One might wish to say that Reid defined these clauses independently by saying that they "state the topic" of the paragraph. If this is the case, then Reid must define what he means by topic. It is certainly unclear why the first two sentences of the given passage are more central to the topic than the others.

Another illustrative example comes from Jones and Jones (1979). They say that:

> ... Cajonos Zapotec grammatically distinguishes the three levels in the basic three level structure: background, backbone, and peak; and in addition there is a level distinguished between backbone and peak which is called *pivotal events* (p. 8).

The question is: how do they know that this is the case? How have they identified these levels of information? Jones and Jones don't provide this information. Unfortunately, this knowledge is absolutely crucial in a paper of this nature. Because they have not provided any operational definition, one is forced to conclude one of two things or a combination of both:

1. The authors are using the marker which they claim codes a certain level of importance to define that level of importance. The problem here is obvious: any argument based on this is circular - the authors are defining a pragmatic notion through the text.
2. The authors are using their own judgements of importance to define the levels in the narrative. Unfortunately, there is a serious problem related to this as well: importance is a subjective notion.

2.3.2 Subjectivity of Importance

If it is, in fact, the case that levels of importance are marked in narrative, then from a functional point of view, the speaker would have to judge which parts of the narrative he/she wished to mark at various levels of importance. The narrator would use whatever means were available to do so in the language. When the hearer/reader on the other end of the communicative exchange heard/read the narrative, s/he would recognize the cues through the markers employed. In this way, the listener/reader would know which information it was that the narrator wished to stress, and how much emphasis was to be placed on that information. Therefore,

what is important about a sequence of events, (in fact, which events are even mentioned), is individual. Although the narrator is somewhat restricted by the language s/he speaks it is still his/her choice as to which events s/he will mention and of those, which will be stressed.

Therefore, if a researcher takes some data from a narrative given by someone else, how is s/he to know which events were considered more or less important by the narrator? There may be some agreement between individuals regarding what the important events will be, but there will probably be some disagreement between two individuals as well. This problem increases when a linguist works with a language that s/he doesn't speak fluently, that may have up to six levels of importance! The task of matching the narrator's subjective opinion of importance when there are six levels to work with is difficult at best. It becomes easy to visualize how a linguist faced with a task such as this might easily fall into the trap of using the marker to identify the level of importance. As previously mentioned, this creates a circular argument in which the information type is identified through the marker and the marker serves to identify the information type.

2.3.3 Unrepresentative Data Sample

As well, there is one more problem with the literature thus far. The data used are often from a limited source (in fact the source is often not provided). This makes the results unreliable for obvious reasons. If the data were collected from only one person then how may the results be generalized?

2.4 Solutions

2.4.1 Primary Solutions

In an attempt to answer some of these shortcomings, Tomlin (1985) suggested that any study attempting to understand some discourse-motivated morphosyntactic form must meet the following four requirements:

1. there must be explicit and syntax independent means of information identification,
2. conditions for coding must be provided (i.e., for the relationship between syntax and semantics/pragmatics),
3. multiple subject data must be gathered,
4. there must be a variation in the discourse setting (p. 88).

His experiment consisted of having subjects watch a video and then describe it in one of four ways:

1. oral on-line,
2. oral delayed,
3. written delayed,
4. written edited.

These four types were meant to occur on a continuum from unplanned to planned respectively.

Tomlin met his four fundamental requirements specified above in the following ways:

1. The identification of foreground information was done independently by obtaining independent subject judges who were asked which events were psychologically more significant.
2. In stating the conditions for coding, Tomlin states that "A given syntactic device pragmatically codes a particular semantic or pragmatic function when one can demonstrate a highly significant statistical as-

sociation between the two, independent of speaker and discourse genre" (p. 96). Therefore, a syntactic device codes a pragmatic (discourse) notion if the correlation between the two is of a certain level.

3. The data were taken from many subjects to ensure that the effects were independent of a single subject.
4. The same results held across the four discourse production tasks revealing that the effect was not limited to a specific task.

Tomlin's paper is definitely a step in the right direction, yet two fundamental problems remains unresolved. Firstly, there is a problem with the way that Tomlin deals with coding relationships. At a certain level of correlation a coding relationship (or causality) is inferred. This is an obvious problem in that no matter how strong a correlation is, one may never assume causality since there may be other significant factors involved. The second problem involves the identification of foregrounded material which must be undertaken independently of the data. Tomlin approaches this problem by having independent subjects judge the significance of each event in the video. However, a point that has already been discussed is that the significance of events is subjective! Only the language producer can say which events s/he found significant.

How may this latter problem be dealt with? Although importance is in the mind of each individual speaker, there are ways to overcome this in a scientific study. Bellan (1988) sought to resolve this problem by asking subjects (the same ones who provided the narratives) which events in a film *they* thought were important. She found support in her data for the hypothesis that important information is correlated with main clauses. However, as mentioned previously, importance is a rather vague notion that may have a number of meanings. It will be the claim here that the notion of foreground as defined by perceptual salience is something differ-

ent from some more common or familiar concept of importance, which is what Bellan would have been measuring. Therefore, although Bellan was measuring importance, it was a different kind of importance from the definition of foregrounding in this thesis.

2.4.2 Psychological Reality

Before continuing, it will be useful to examine the kinds of claims that are being made in the literature discussed up to now. Each one suggests that some morphosyntactic marker may be present in discourse in order to mark the important parts for the person hearing/reading the narrative. The question that must be asked is: Does the foreground/background distinction have any psychological reality for a speaker/writer or a hearer/reader of narrative. Is this really what is going on cognitively or not?

The only way in which this question can be answered is by starting from a psychological perspective and seeing how this reflects in actual language data. Nearly every other paper thus far has tried to do the opposite: look at the data and try to say something about the cognition of the speaker. One might ask: "But how do you know whether what you're looking at in terms of cognition is actually reflected in the language?" The way in which this problem may be overcome is by attempting to manipulate cognitive situations and observe the changes in the language.

How may this be done with foregrounding? An experiment must be carried out that manipulates some cognitive event thought to be related to importance. If the change is reflected in the language data in some predictable way, then one can identify the foregrounded part of the narrative with some confidence through the marker(s) discovered through the manipulation.

In this thesis it is proposed that the cognitive event that is motivating the foreground/background distinction in narrative is perceptual. Others have also made the claim that there is a perceptual basis to foregrounding in language.

Wallace (1982) felt that the linguistic categories of foreground and background could be compared to the perceptual notions of figure and ground. In general, according to this Gestalt theory, the figure is thing-like with distinguishable boundaries while the background is more continuous and diffuse. Wallace says that "Human perceivers do not lend equal weight to all incoming sensation, but notice some as more salient figures which 'stand out distinctively' in front of a less salient ground" (p.216). Wallace suggests that there is a set of linguistic figure/ground properties. In language the foreground, the figure, or the more salient parts of the discourse, tend to reflect more of the following features: human, animate, proper, singular, concrete, definite, referential, count, non-third person, perfective, present-immediate, eventive, transitive, actional verb, deliberate action, main clause. On the other hand the background, or ground or less salient parts of language may have more of the following properties: nonhuman, inanimate, common nonsingular, abstract, indefinite, nonreferential, mass, third person, nonperfective, nonpresent-remote, noneventive, intransitive, stative verb, accidental action, subordinate clause (p. 212).

Reinhart (1984) also proposes that "the distinction between foreground and background is the linguistic counterpart of the perceptual distinction between figure and ground proposed in the gestalt theory" (p. 787). However, she feels that foregrounded information cannot necessarily be seen as more important or salient than certain elements of the background and, therefore, the definition of foreground is not importance but something else. Her argument is that, depending on the context of the background, the perception of the foreground can change. Therefore, there is a relationship in which there is a "... functional dependency of the figure on

the ground" (p. 788) but not vice versa. She goes on to claim that "It is this type of functional dependency which characterizes the relations between 'foreground and background' in the narrative text as well ... Therefore, foreground, ... in and of itself, is meaningless" (p. 789). Reinhart goes on to give criteria commonly associated with the foreground in visual perception according to gestalt theory:

1. good continuation which corresponds to the temporal continuity usually present in the foreground,
2. size and proximity which claims that the smaller area or the objects closer together in the visual field will be seen as the figure; this corresponds to the punctual nature of foreground events which take up a smaller amount of time,
3. closure which says that the more closed area is the easier to interpret as the figure; this corresponds to the completeness of foregrounded events (i.e., they have started and ended).

There are two serious problems associated with the linking of the traditional gestalt notion of grounding with foreground and background in narrative. The first is that all of the gestalt principles dealt with by both Reinhart and Wallace relating to figure and ground are dealing with static objects! When one is watching a video or a sequence of events, MOVEMENT plays an important role in directing our attention, but the traditional Gestalt principles do not deal with this aspect of perception. In fact it would seem that movement plays a large role in linking together events that occur in some sort of sequence (Isenhour, 1975). Therefore, any perceptual theory of foreground must take into account the role that movement might play in directing attention and thus shaping perception which in turn could influence the morphosyntactic markers used by a speaker.

Secondly, Reinhart states that "While we may tend at times to associate the figure with the 'important' part of the visual field, or with the center of attention,

these notions are not part of the concept of figure" (p. 789). Theoretically, this is true - there is nothing inherently important about any one part of a scene or video. However, as we have already stressed and as been recognized in the psychology of perception, we tend to interpret these stimuli as being important to us in various idiosyncratic ways even though the bombardment of the visual stimulus is not inherently salient. In fact, we *must* interpret these stimuli in various ways or else we would not be able to function in the world. When it comes to reporting a narrative, the same holds true. Certain aspects are perceived as more central or salient to the story. A perceptual interpretation of a stimulus is neither the world imposing itself on an individual, nor vice versa, but rather some combination of the two. This belief that neither the figure nor the ground is more important perhaps stems from a view of language that both Reinhart and Wallace seem to share. They view grounding as a property of the text itself where the figure and ground are identified by the language perceivers in order to assist them in their interpretations of the utterance. Unfortunately, this view fails to take into account the fact that there is a speaker behind the utterance who is ultimately imposing his/her interpretation of figure and ground onto the utterance. It is the claim here that the perception of salience in the visual array will be reflected in the language as the foreground. This is a view of grounding in language that looks at the speaker's perception of a situation and its reflection in discourse.

2.4.3 Requirements of a Study

Based then on the previous discussion, there are three requirements that must be met in a valid study of foregrounding in narrative:

1. The motivation for the distinction must be psychological, not text-based. In this case foreground information is a function of perceptual salience.

2. Some cognitive manipulation must be present in order to ensure that cognition is, in fact, reflected in the language data. This is done by varying the perceptual experience to see if in fact it is reflected in the language used.

3. Data must be collected from a number of individuals to ensure that the results reflect some generality.

A study, attempting to meet these three requirements will be outlined in Chapter Three.

3. METHODOLOGY

3.1 Introduction

This chapter will discuss the way in which the experiment was carried out, as well as the analytic procedure. The general hypotheses in this experiment are as follows:

H_1: Auditory distraction will result in changes in amount of reporting of visually salient events.

H_2: Levels of foreground events will be marked morphosyntactically through Tense/Aspect/Modality (TAM), particles, or clause type and/or foreground will be marked as distinct from the background through the use of these same devices.

In the following experiment both of these hypotheses will be tested. H_1 will be tested by having two conditions which differ with respect to attentional allocation: with or without soundtrack. It is expected that in the condition in which attention may be devoted solely to visual perception, more visual foregrounding will be evident because this group will have more perceptual resources to devote to the visual array. In the other condition (with soundtrack), attention is divided between vision and audition and therefore there should be less visual foregrounding or different events will be mentioned. There are some assumptions implicit in the first hypothesis that should be clarified at this point. One is that movement in the visual array is salient information and the second assumption is that if this movement is reported it will be a foregrounded event and marked as such.

The second hypothesis will be tested by looking at the foregrounded events in their perceived order of significance by the group (i.e., frequency of mention) to see if there seem to be any differences between levels in use of TAM, particle or clause type. If these morphosyntactic devices occur randomly, then the hypothesis that levels of foreground are marked will not be supported. It must be kept in mind

that this analysis can only tell us something about the group - it cannot allow any conclusions to be drawn about an individual speaker. As well, all foregrounded verbs will be compared to other verbs to see if there is any morphosyntactic difference between foreground and background actions overall.

3.2 The Experimental Procedure

3.2.1 Subjects

There were 24 subjects matched for gender across two conditions but otherwise assigned randomly (12 in each condition). All subjects but one were volunteers from undergraduate linguistics courses (with an average of 4.5 linguistics courses). Eighteen were female and six were male and they ranged in age from 19 to 28 with a mean age of 21.8 years (although 2 subjects did not wish to report their ages). Four of the subjects had a language other than English for their native language although all four reported that they spoke English better than or as well as their native language.

3.2.2 Materials

A seven minute clip from the movie "The Pink Panther Strikes Again" was used. The scene was known as "The Dentist Scene" as it portrayed a dentist's visit to a castle. The scene had a soundtrack with dialogue but only half of the subjects (one condition) heard the soundtrack. The scene was filled with visual action and the story line could be followed by viewing the video alone without the soundtrack.

As well, a verbal-visual questionnaire was used in which there were 46 statements to which Agree, Disagree, or Not Sure responses were to be given. This questionnaire was designed to measure the presence of six factors in each subject: Speaking Fluency, Writing Fluency, Grammatical Sensitivity, Lack of Language Facility, Use of Imagery, and Reading Facility. This questionnaire was given because

it was thought that it might provide interesting information regarding individual differences over and above the manipulated variable.

3.2.3 Procedure

Subjects (in groups of 1 to 5) were seated in a room with a video machine and given a booklet within which to write, a set of instructions, and a background information sheet to fill out. If there was more than one subject in the room, they were instructed not to speak to one another for the duration of the session. They were told that they would be viewing a seven minute videotape two times in a row and would then be required merely to write down in the booklet what happened in the video. Half of the subjects were told that they would be viewing the scene without the soundtrack although one did exist. Any questions were answered. The video was then started and it was watched twice by the subjects. There was approximately a 1 minute span between viewings while the tape was rewound. Questions were answered during this time. The video was watched twice by each participant because it was felt that the first viewing would give them a framework within which to evaluate the second viewing. In other words, if importance or salience is organized into levels, this procedure would allow participants every opportunity to organize each event in relation to all of the other events. After the second viewing the subjects were instructed to describe what happened in writing as if they were telling it to someone who had never seen the sequence, and that there was no time limit. The subjects were told that their description would be given to another person who had not seen the videotape and that this person would be required to form his/her own description based only on the narrative provided by the subject. This was done so that the subjects would take the task as seriously as possible. They were also instructed to fill out the questionnaire after they had finished, but not to look at the questionnaire until afterwards. The questionnaires were placed on a

table beside the subjects to be picked up and completed after the description had been written.

3.3 The Analytic Procedure

Once the data had been collected it was entered into the computer and each sentence was numbered (e.g., S001, S002 ... Sn). Spelling and grammar were not corrected.

3.3.1 Core Verbs

The first goal of the analysis was to isolate those movements or salient information in the visual field that were reported. These were called "core actions" and were identified in the following way. A verbal unit (called the "core verb") was considered to code a core action if it met the following criteria:

a. The verb had to represent a perceptible movement in the visual field; the verb had to code the movement from beginning to end or else the beginning or end of a more continuous movement (but not describe a continuous movement). Therefore, in a passage such as "A man is sitting at a table clutching his jaw" neither 'sitting' or 'clutching' would be considered a core verb since they are not referring to a movement. Rather these verbs are describing a state in some sense. However, if someone included a passage such as "The dentist takes off his glasses" then 'takes off' would be considered to be a movement and included as a core verb.

b. If two verbal units represented the same movement then the more specific or descriptive was chosen, or if they were of the same specificity and descriptiveness then the second mention

was chosen. In an example such as "The dentist gets a mace. He runs over to the wall and drags it back", the verb 'gets' is a general description and the verbs 'runs' and 'drags' are more specific descriptions of the same sequence. Therefore, 'runs' and 'drags' would be included while 'gets' would not.

c. Any verb that referred to information only available from the soundtrack was not included (the selected verbs encoded only visual information). For example, if a subject reported that "The dentist told the man to put the cotton on his face", the verbal unit 'told to put' would not be included because it is information that is only available from the soundtrack.

Scene breaks were not seen as meeting the requirement for movement in the above criteria since they involve a different kind of movement that is accounted for by viewers when they are watching a movie. Using these criteria the core actions were identified for each narrative report. Three independent judges who were also familiar with the video went through this procedure using the same criteria to ensure that the researcher was not imposing idiosyncratic judgements onto the data. In the majority of cases, the judges were in agreement with the verbs chosen by the researcher.

However, there were three ways in which the judgements did not match. Firstly, in a number of cases, the judges chose verbs referring to the soundtrack which, as stated in the criteria, were not to be selected. Secondly, there were some clear oversights which were verified as such by the judges. These included cases where an obvious movement, such as 'opened the bag', were not chosen and cases where a verb was chosen that was obviously not coding a movement, such as 'the doctor thinks he has found the right tooth'. Finally, there were some disagreements between the researcher and the judges. In most of these cases arbitrary decisions

had to be made since the judgements were somewhat tricky. For example, in a passage such as "he *missed* the table" some of the judges treated 'missed' as a core action. However, it is the belief here that 'missed' is a non-action; it is describing something that did not really happen (i.e., he did not really put his bag on the table). On the other hand, in the passage "he *dropped* his bag on the floor", the verb 'dropped' is seen to code a movement represented by the bag moving from the doctor's hand to the ground. 'Missed' does not specify such a movement.

Another interesting case is illustrated in the following passage: "The dentist *tells* the patient *to put* the cotton over his face. The patient *does* so". In this example, 'tells...to put' was considered to be a core action by some of the judges. However, this is really information from the soundtrack and does not mention a movement. However, the verb 'does' represents such a movement: that of the patient putting the cotton on his face. It is not until this point in the narrative that the narrator is specifying the actual movement. As well, it was difficult to identify whether some of the verbs used represented continuous actions or not. For example, most subjects described the old man "riding up" to the castle. It was thought that "riding up" was not continuous since it specifies an end point whereas if only "riding" had been mentioned this would have been viewed as a continuous action.

Once the core verbs for each subject had been identified, then paraphrase relations between subjects in each condition were sought. This involved finding each verb that represented a specific movement by all subjects. For example, out of 24 subjects, 8 in total (4 from each condition) mentioned action #22 where the dentist *pokes* the patient in the eye. The verbs used to describe a movement were often different between subjects, but as long as they all referred to the same movement in the video, they were grouped together.

One concern that becomes apparent is how can one be sure that the verbal units used by different subjects are in fact marking the same motion? Newtson and Engquist (1976) found that the breakdown of ongoing behavior was fairly consistent across subjects. They felt that "The most distinctive characteristic of ongoing behavior ... is change over time" (p. 448). They interpreted change over time as being a property of the stimulus that was reported similarly across subjects. However, what Newtson and Engquist were trying to do was to identify something *in the stimulus* that perceivers see consistently as an action or event. The fact that they found that there are indeed similar perceptions of ongoing behavior may seem to support their conclusions. However, there is another way to look at these results. One could say that the results found by Newtson and Engquist do not say anything about the stimulus itself, but rather about the cognitive makeup of the individuals viewing the stimulus. It is more reasonable to analyze the stimulus from the perceiver's point of view rather than as an objective entity. Therefore, although not entirely in agreement, the subjects will tend to break up the ongoing behavior in similar ways and it will be the view in this thesis that this is due to some cognitive property of the individuals, not necessarily to some property in the stimulus.

Once the core actions and paraphrase relations had been identified, a concordance was made of the core verbs for each condition using the Oxford Concordance Program (OCP). Each core verb was numbered and marked in the data and OCP picked out each occurrence of every verb and gave the frequency. In this way OCP was used to pick out the occurrence and frequency of each core action across subjects for each condition. The concordance for each condition is provided in Appendix A.

3.3.2 Obligatory Elaborations

The next step in the analysis was to identify the obligatory elaborations for each core verb for each condition. Obligatory elaborations were defined as arguments on the core verb that were specified by at least 90% of the participants in a condition who mentioned that particular action. This category was, therefore, defined by the subjects themselves. Five questions were asked about each of the actions: who, what, where, when, and how? This approach was taken for two reasons: firstly, to avoid any reliance on syntactic notions such as subject and object, and secondly, because different verb types subcatagorize for different arguments and since subjects used various verbal units to represent the same action, the same information could be represented structurally in various ways. It must be noted, however, that these elaborations include both those arguments that *must* occur with the particular verb used to represent an action in the video, plus those that would ordinarily not be required to occur with a particular verb but are in fact included by 90% of the subjects who mention that action. This approach is taken not only because the subjects are using different verbs that subcatagorize for different arguments (and therefore, what is an obligatory argument for a particular action may change depending on the verb used), but also because subjects may choose the verb that is in fact used, making it nearly impossible to identify what the subject must include due to syntactic constraints, and what he must include due to other discourse reasons. For example, in the 'without soundtrack condition' for action #78, one subject said "the dentist removes the man's problem tooth", while another subject said "When the tooth comes out...". Both are specifying the same action and both mention "tooth" in the event. In one case "tooth" is the subject and in the other the object. However, both count as the same elaboration: *what* comes out? The core actions plus the obligatory elaborations were said to constitute an event. A list of the top ten events for each condition is provided in Appendix B. In order to test the hypothesis that the 'without soundtrack condition would mention more obligatory elaborations, they

were counted for each condition group. A count of one was given for each question above that was answered by 90% of the group.

3.3.3 Testing H_1

It will be recalled that H_1 proposed that the perception of movement in a visual array was what would tend to be reported as foregrounded information in a narrative. The way that this was to be tested was by manipulating attentional allocation (through presence or absence of a soundtrack). It was predicted that the 'with soundtrack condition' would report more visually salient events or else that the two conditions would report different visual events due to differences in attentional allocation.

These differences were tested in two ways. First of all, a matrix was constructed in which a 1 (positive) or a 0 (negative) was entered for each verb for each subject, specifying whether or not the action was mentioned by each subject. Only verbs with a frequency over one in at least one condition were included in this matrix. From this matrix, a proportion of subjects mentioning each verb was calculated. A two-tailed t-test was used to compare the total proportion of mentions across all subjects and verbs between conditions. The results of this test were entered into Table One and were used to test the hypothesis that the 'without soundtrack condition' mentioned more core actions overall than the 'with soundtrack condition'.

Secondly, a verb-by-verb analysis was done between the two conditions in which the number of subjects that mentioned an action was compared between conditions using a Chi Square test. The results of this test were entered into Table Two. This analysis was intended to show whether there were differences between the two conditions in terms of specific actions mentioned. These results will be discussed in Chapter Four.

Finally, a sample of the number of obligatory elaborations for each action between the two conditions were compared. The results of this analysis were entered into Table Three. Again, this analysis was intended to show whether one condition elaborated more on the core actions than the other.

3.3.4 Testing H_2

Using the OCP frequency count, the hypothesis that different levels of importance are marked was tested. Three ways of marking importance, discussed in Chapter 2, were looked at:

1. Tense/Aspect/Modality,
2. Particles,
3. Clause Type.

For each of these morphosyntactic devices, the OCP frequency listing with concordance (context) was used. The frequency of foregrounded verbs from lowest to highest was observed and changes in each of the 3 devices above were noted. The way that this was done was by counting the total number of mentions (tokens) across all actions (types) for each condition, and then dividing the tokens roughly into three groups of an approximately even number of tokens (about 130). The group of tokens that had the greatest number of tokens per type (highest number of mentions per action) was seen as the highest level of importance. The group of tokens that had a medium token to type ratio was seen as the intermediate level of importance. Finally, the group of tokens that had the lowest number of tokens per type (lowest number of mentions per action) was seen as the lowest level of importance. Differences between the three groups were observed in terms of the three morphosyntactic devices listed above. In this way, the hypothesis that levels of importance or foreground exist could be tested. As well, for those morphosyntactic devices that occurred with regularity in all foregrounded events (regardless of frequency) a

comparison was made to the background. In this way, any distinction between foreground and background could also be identified.

Although it is difficult to predict which morphosyntactic devices might occur between levels of foregrounding (because differences would be so subtle), between foreground and background this kind of prediction becomes easier to make. In terms of the TAM system, tense generally refers to our concept of time as points in a sequence. Therefore, in a narrative we could expect one of two things to happen regarding tense. Firstly, since the actions are in the past, the narrator could use the historical past tense. Secondly, to make the story more lively and interesting the narrator could use the present tense giving the impression of the events occurring NOW.

Aspect involves notions of the boundedness of time spans. There is usually some distinction made in languages between unbounded or continuous actions and bounded or punctual actions. Since the hypothesis proposes that movement is what is reflected in foregrounded information, one would expect bounded actions to be more prevalent within the foreground. However, English does not have a distinctive punctuality marker, only a durative (or progressive) marker: *be* + *-ing*. Therefore, what is predicted in terms of aspect is that there will be less forms of this type in the foreground than the background.

Finally, modality involves the notions of true, false, or possible. The modality corresponding to truth or actuality is called the realis mode. The mode corresponding to falsity or possibility is called the irrealis mode. It is expected that foreground information will always correspond to truth (realis) - in other words, it really happened. Foreground verbs will be in the realis mode more often than background verbs which will be in the irrealis mode. Unfortunately, there is no overt marker for realis in English. However, one would expect to see less probability and negative modals (irrealis) in the foreground than in the background.

In terms of particles, the only one that it was thought might differ between the foreground and the background was the copula verb "is" or "be" since they are related to expressing states, which would be predicted to be more prevalent in the background. Therefore, one would expect that copula verbs would occur more in the background.

Finally for clause type, it has long been suggested that the more important information is carried in main clauses. Since it is suggested here that foreground corresponds to some notion of importance, it will be predicted that more main clauses will be seen in the foreground.

Unfortunately, since this thesis is not analyzing the nature of backgrounded information, there is no real operational definition other than as an "elsewhere case". Because of this, taking counts of morphosyntactic devices in the background can only be said to represent trends in the data. In order to get counts on background information, three subjects were chosen randomly from each condition. The background verbs were those that were not foregrounded. As well, certain verbal units that were considered as possible foreground verbs, but eliminated due to uncertainty, were not counted. Any verbal units dealing with the soundtrack were also excluded in order to maintain consistency with the foreground verbs.

For both the comparison between levels of foreground and between foreground and background verbs, the ways that these claims were tested are as follows:

For tense, if the simple present or simple past was represented, they were counted. Present participles were not counted (since no predictions have been made about them). If an infinitive occurred, the main verb preceding it was analyzed. For example, if someone said "tries to pull" the tense on "tries" would be looked at since it also specifies the tense associated with the infinitive.

For aspect, only forms of *be* + *-ing* were counted. No *-ing* forms were included unless they occurred with some form of *be*.

For modality, realis forms were represented by no modal. Statements of possibility or probability and negation were identified by modals such as *could, would, should, might*, etc.

For particles, every time a copula verb *is* or *be* occurred with the verb in question, it was counted.

Finally, in terms of clause type, each verbal unit was identified as either occurring in a main or dependent clause. The dependent clauses included complements, adverbial clauses, adjectival clauses and relative clauses but infinitives were not counted as separate dependent clauses.

In this way frequency counts were taken of these morphosyntactic markers for each group in question in order that the various groups could be compared. The results of the comparisons between levels of foreground are presented in Table Seven and between foreground and background in Table Eight and will be discussed in Chapter Four.

3.3.5 Background Information

Finally, what is considered to be background information in this analysis will be briefly discussed. Aside from the core verbs and obligatory elaborations, all other information in the narrative was considered to be background. This type of elaboration is the most variable and idiosyncratic; because it is optional, the speaker can add anything he/she wishes within reason. A narrative would seem quite boring if all it contained were the core actions and obligatory elaborations (i.e., the events). Optional elaboration is a way for the speaker to make the core actions and obligatory elaborations more interesting and set them in a richer context. For the most part, optional elaborations give extra details about the other compo-

nents of the description, make comments about the speaker's own personal feelings about the situation, or else assert inferences about actions that did not occur in the stimulus. The optional elaborations will not be analyzed in this thesis. There is potential, however, to look at differences in the types of optional elaborations made (i.e., inferences, comments, or extra details) or which events are elaborated on the most and why.

4. RESULTS

4.1 Introduction

After the core verbs had been identified and labelled in the text files, and an OCP analysis had been carried out, statistical tests were done in order to test the two hypotheses:

H_1: Auditory distraction will result in changes in the amount of reporting of visually salient events.

H_2: The reported levels of importance and /or the distinction between foreground and background will be marked morphosyntactically through TAM, particles or clause type.

For all statistical tests, the significance level was set at $p = 0.10$. The reason why p is relatively high is because the sample is a fairly small one, and because this is an exploratory study. Each of these will be discussed below.

4.2 Results for H1

In order to show that the perception of movement is reflected in narrative as the foregrounded material, an attentional manipulation was carried out: the stimulus was presented with or without soundtrack. What was predicted was that the 'without soundtrack condition' would lead to more visual foregrounding and the two condition groups might also show differences in the types of events mentioned.

4.2.1 Differences in Overall Frequency

As seen from Table One, which illustrates the results from the t-test which tested whether there was a difference in overall frequency of mention between the two conditions, it can be seen that there is no significant difference between the two conditions. In other words the 'without soundtrack condition' did not induce more mention of foreground actions overall than the 'with soundtrack condition'. It would

appear then that H1 is not supported regarding the number of actions mentioned in the two conditions.

TABLE ONE

T-test Comparing Total Frequency of Mention between Conditions

	Cases	Mean	S.D.	T-Value	p-level
Without Soundtrack	12	33.42	12.44	0.34	0.738
With Soundtrack	12	31.92	8.96		

4.2.2 Differences in Actions Mentioned

Based on the data tabulated, proportions of subjects in each condition were calculated and each action was tested using a Chi Square test to see if there were any differences between the two conditions in terms of specific actions mentioned. Table Two shows that only two verbs (out of a possible 79) had a significantly different number of mentions between the two conditions: action #11, 'enters' and action #11a, 'stumbles'. The reason why these two actions would show differences is unknown. However, it is interesting to note that for action #11, the 'with soundtrack condition' mentioned it more often, which goes contradictory to the prediction. It is not known why this would be the case for this particular action. For action #11a 'stumbles' the 'without soundtrack condition' mentioned it more often which corresponds to the predicton made, although it is unknown why this only showed up in one action. Since there was a total of 79 actions tested (with a

frequency over one) this is a very small number. It may be concluded that the types of actions mentioned are also not different between the two conditions.

TABLE TWO

Chi Square Showing Significantly Different Actions based on Proportion of Mention between Conditions

	Cond 1 'Without'	Cond 2 'With'	Chi Square	p-Level
V#11	6	11	3.23	0.07
V#11a	12	8	2.70	0.10

4.2.3 Differences in Obligatory Elaborations

Based on the analysis done to count the number of obligatory elaborations for each condition it became clear that the number of obligatory elaborations for the top ten actions in each condition were identical. For each condition a total of 18 obligatory elaborations were counted within the top ten events. This also does not support H_1, that the 'without soundtrack' group will do more visual foregrounding than the 'with soundtrack' group, including amount of elaboration on the core actions. To sum up then, H_1 has not been supported by the results of this manipulation. Attentional differences, as manipulated through use of soundtrack, are not reflected in the amount of foregrounding in narrative as defined by movement in the stimulus.

TABLE THREE

Results of RCA and Cluster Analysis with respect to Condition Groupings

	Condition 1 'Without'	Condition 2 'With'	Total
Cluster 1	1,2,9,10,11	13,14,15,21,23,24	11
Cluster 2	3,4,5,6,7,8,12	16,17,18,19,20,22	13
Total	12	12	

Because no significant differences were found between the two condition groups in both overall frequency of mention and in mention of specific actions, a Response Coincidence Analysis (RCA) was conducted together with a cluster analysis to see if any groups could be identified within the 24 subjects but independent of the imposed groupings. This procedure followed the technique outlined in Baker, Hogan, and Rozsypal (1988) in which subjects are grouped according to their similarities in terms of the patterns among their responses (i.e., the movements mentioned). The results of this analysis are presented in Table Three. It is clear that the subjects clustered into two distinct groups of 11 and 13 cutting neatly across the two conditions. Therefore, something other than the manipulated variable was a strong factor in grouping subjects in terms of their narratives and reported core verbs.

Based on this information, the two clusters were compared. First of all, a t-test was conducted to check for a difference in overall frequency of mention of foreground actions between the two cluster groups. This information is presented in

Table Four. It will be observed that the mean frequencies for the two cluster were 22.6 and 41.2 which are significantly different. It would seem that the two clusters may be differentiated on the basis of frequency of mention. Secondly, the proportion of subjects who mentioned each action within each cluster was compared for each action using a Chi Square test. These results are provided in Table Five. It was observed that 14 out of 79 actions were mentioned in significantly different frequencies between the two clusters.

TABLE FOUR

T-test Comparing Overall Difference in Frequency of Mention between Cluster Groups

	Cases	Mean	S.D.	T-value	p-value
Clus 1	11	22.6	5.7		
				-8.79	0.00
Clus 2	13	41.2	4.3		

It should also be noted that in every case, Cluster 2 mentioned the action significantly more than Cluster 1. The actions that differed between the two clusters are summarized in order below:

1. Dentist walks over to patient.
2. Dentist walks over to patient.
3. Dentist pokes man in the eye.
4. Dentist opens up his briefcase.
5. Dentist takes off his glasses.
6. Dentist taps on the man's teeth.
7. Dentist goes back to his bag.

8. Dentist looks around the room.

TABLE FIVE

Chi Square Showing Significantly Different Actions Based on Proportion of Mention between Clusters

	Clus 1	Clus 2	Chi Square	p-value
1. V#13	2	10	6.04	0.01
2. V#20	0	5	3.26	0.07
3. V#22	1	7	3.55	0.06
4. V#24	1	9	6.56	0.01
5. V#28	2	9	4.37	0.03
6. V#34	4	12	6.06	0.01
7. V#38	0	5	3.27	0.07
8. V#43	2	9	4.37	0.04
9. V#53	0	7	5.96	0.01
10.V#55	2	11	8.09	0.01
11.V#79	5	13	6.77	0.01
12.V#80	2	10	6.04	0.01
13.V#85	4	12	6.06	0.01
14.V#90	0	6	4.53	0.03

9. Patient stands up.
10. Dentist walks up stairs.
11. Dentist falls off table.
12. Dentist gets up off of floor.
13. Dentist fixes nose.
14. Servant spills water basin.

It is interesting to speculate on why these fourteen actions would be mentioned more by one cluster than the other. Note that for the most part, all of these events are secondary; that is, none of them is central to the story. Perhaps while all subjects mention the crucial information, some subjects provide more than is absolutely necessary. In other words, perhaps one cluster is just wordier than the other. It may therefore, be concluded that each cluster group differed in terms of the scope of actions mentioned, but quite independent of the condition group to which they were assigned.

4.2.4 Visual/Verbal Questionnaire

A questionnaire consisting of 86 items originally developed by Pavio and Harshman (1983) for an analysis of Pavio's 'dual coding' theory was analyzed by Baker and Mos (personal communication) from data they gathered from over 700 subjects. The questionnaire, based on items referring to self-reports about the use of and facility with language and visual imagery, did not yield the expected two factors under Pavio's hypothesis. Rather, it resulted in six factors suggestive more of attitudes toward various aspects of language use and one factor indicating use of imagery.

Baker and Mos confirmed the first four factors reported by Pavio and Harshman plus two others. They labelled the six factors as:

I. Writing Fluency: This factor reflects the individual's ability to write stylistically. It correlates with such statements as 'I have difficulty expressing myself in writing' (F) and 'I can easily think of synonyms for words' (T).

II. Speaking Fluency: This factor seems to mirror the individual's proficiency in expressing him/herself using language. It includes correlations with items such as 'I am a good storyteller' (T) and 'I often have difficulty in explaining my thoughts to others' (F).

III. Use of Imagery: This factor measures the degree to which the individual uses visual imagery. It correlates with such items as 'I often use mental pictures to solve problems' (T) and 'My dreams are extremely vivid' (T).

IV. Grammatical Sensitivity: This factor shows the degree to which the individual is aware of the correct structure and usage of his/her language. It includes statements such as 'I am continuously aware of sentence structure' (T) and 'It bothers me when I see a word used improperly' (T).

V. Reading Facility: This deals with the individual's ability as a reader. Statements such as 'I consider myself a fast reader' (T) and 'I read a great deal' (T) are associated with this factor.

VI. Lack of Language Facility: This factor is associated with the individual's ability to learn languages. Related statements include 'I have found it easy in the past to learn a second language' (F) and 'I memorize material largely by the use of verbal repetition' (F).

These appeared to be excellent candidates for assessing subjects' self-perceived language skills which could govern how they might perform in psycholinguistic studies

requiring language production or comprehension. Work is currently progressing toward the development of a questionnaire with this more explicit goal in mind.

For present purposes, the 56 items associated with the six factors mentioned above were extracted and randomized to form the set used in this study. While the current form is quite preliminary at this stage, the available data suggested that it could still be quite effective in the present case. As will be shown, this clearly proved to be the case. The Visual/Verbal Questionnaire is found in Appendix C.

In order to better understand the nature of the two cluster groups, t-tests were conducted to compare the results of the six factor scores from the Visual/Verbal Questionnaire that was given during the experimental session. Table Six shows that three of the six factors measured in the questionnaire ($p < 0.10$) were significant with respect to the two clusters: Speaking Fluency, Use of Imagery, and Lack of Language Facility. In other words the two cluster groups answered the Visual/Verbal Questionnaire in significantly different ways for these three factors. It will be noted that Cluster One which scored lower in terms of overall frequency of mention (Table Four) showed more of a facility for language learning, more use of imagery, and a much lower speaking fluency score than Cluster Two which had the higher mean in terms of overall frequency of mention. It is probable that, for these results, the high versus low speaking fluency is likely what is creating the differences between the two clusters in the task.

However, one of the factors in the Visual/Verbal Questionnaire that was not significantly different between the two clusters was Writing Fluency. Because this was a written task, it would be expected that this would also be significant between the clusters. The question becomes: why is Speaking Fluency significant while Writing Fluency is not? Perhaps this is due to the fact that since the

participants did not have time during the task to do any extensive editing, the task was more akin to their speaking fluency.

TABLE SIX

T-test Comparing Cluster Groups with Coefficients from the Verbal-Visual Questionnaire

	Cases	Mean	S.D.	T-value	p-value
Writing Fluency					
Clus 1	11	0.52	0.46		
Clus 2	13	0.60	0.40	-0.46	0.65
Speaking Fluency					
Clus 1	11	0.18	0.42		
Clus 2	13	0.56	0.33	-2.40	0.03
Use of Imagery					
Clus 1	11	0.82	0.16		
Clus 2	13	0.55	0.49	1.86	0.08
Grammatical Sensitivity					
Clus 1	11	0.11	0.40		
Clus 2	13	0.35	0.36	-1.52	0.14
Reading Facility					
Clus 1	11	0.41	0.59		
Clus 2	13	0.71	0.35	-1.47	0.16
Lack of Language Facility					
Clus 1	11	-0.29	0.54		
Clus 2	13	0.12	0.56	-1.80	0.09

As well, Speaking Fluency may be more highly related to amount of information given in a narrative, while the Writing Fluency factor may measure more stylistic elements in a written passage. The group that scored lower in Writing Fluency also scored higher in Use of Imagery than the other cluster. It would ap-

pear that Cluster 1 is less verbal and more visual than Cluster 2. However, Cluster 1 showed more of a facility for language learning than Cluster 2 which makes no sense and cannot be explained here. A speculative possibility might be that subjects highly fluent in their native language are annoyed by lack of facility during early stages of second language learning.

In general, it would seem that the factors that subjects brought to the task with them were far more influential than the manipulation itself in creating differences in the narratives. Any independent variable was overshadowed by these subject-internal factors.

Because such strong internal factors were found within the subjects, overshadowing any dependent effects, a condition analysis was done within cluster groups. Within Cluster 1 (the low frequency group) only 1 action, #11 'the dentist enters the room', was significantly different between the two condition groups. Within Cluster 2 (the high frequency group), there were four actions that were mentioned a significantly different number of times between the two condition groups. The first was #11a "the dentist stumbles around the room', the second was #40, 'the dentist gives the patient a piece of cotton', next was #71, 'a servant comes in with towels and water', and finally #84, 'the doctor looks in a mirror'. Since there are a total of 79 foreground actions, the manipulated variable doe. not seen to have had any effect, even within cluster groups. However, by the time the subjects are divided into cluster groups and then compared by condition, the numbers are quite small and it would be difficult to achieve sensitive results.

4.3 Results for H_2

4.3.1 Levels of Importance

It will be recalled that in order to test the hypothesis that levels of foreground information are marked through TAM, particles, or clause type, these mor-

phosyntactic devices were observed. The results are found in Table Seven. Three levels were observed in ea.h condition. In terms of the tenses and aspects observed, there appears to be relatively little difference among the three levels in either condition. In terms of the use of a copula verb *is* or *be*, again, the differences are slight except in the 'without soundtrack condition' where the highest mention actions had 8% copula verbs as opposed to 3% and 1% in the lower mention action groups.

TABLE SEVEN

Percentages of Morphosyntactic Devices Used in Levels of Foreground

	Tense		Aspect	Copula	Clause Type	
	Pres	Past	be + -ing	be/is	Dependent	Main
With Soundtrack						
Low Freq	65	16	2	3	12	88
Med Freq	63	22	1	2	20	80
High Freq	72	14	0	0	11	89
Without Soundtrack						
Low Freq	70	20	1	1	10	90
Med Freq	71	19	1	3	15	85
High Freq	70	17	2	8	9	91

Finally, in terms of the clause types, in both conditions there is little to no difference in clause type between the highest mention actions and the lowest mention actions. However, in both conditions, in the middle group, the use of main clauses drops somewhat. The drop is quite small in both cases. What may be concluded from this analysis is that levels of foregrounding are not marked through these morphosyntactic devices in English and no other potential markers were observed among the three levels. Therefore, Jones and Jones (1979) 'multiple levels hypothesis' is not supported and there appears to be no morphosyntactic marking of peak as distinct from the rest of the foreground using this analysis.

4.3.2 Differences Between Foreground and Background

H_2 also suggests that there may be a distinction between foreground and background. By comparing the use of the same morphosyntactic devices as above, between the foreground and background verbs (seen in Table Eight) it was noted that there was more use of the present tense in the foreground. There was also more use of the progressive aspect and the copula in the background. As well, more dependent clauses showed up in the background along with more irrealis verbs of possibility and negation. This supports some of the earlier predictions made about the types of markers expected in the foreground and background.

TABLE EIGHT

Percentages of Morphosyntactic Devices Compared between Foreground and Background

Type	Tense		Aspect	Copula	Mode	Clause	
	Pres	Past	Prog	be/is	Irreal	Dep	Main
Fore-ground	68	18	1	3	0	13	87

Back-ground	48	15	12	34	13	30	70

The present tense is used in the foreground perhaps to make the story seem more vivid, as though it were happening in the present. For example, in order to make the story seem more life-like or exciting a narrator might say 'The dentist goes over to the patient' instead of 'The dentist went over to the patient'. The progressive aspect was seen more in the background because it was thought that the verbal units in the background would be coding more continuous, unbounded states and actions as opposed to more punctual events in the foreground. For example, the background would obviously include more verbal units like 'The patient is holding his mouth' rather than 'The patient grabs his mouth' (which would be in the foreground if it had occurred in the video). The copula was used more in the background also to code states of being which were not seen in the foreground. An example of this would be 'There is a castle' or 'The room is dark'. These are states of being and therefore, do not represent any sort of change of the kind that would be found in the foreground. Irrealis modes (negation and probability) were not present in the foreground while they were in the background. In other words, passages such as 'The doctor did not put his bag on the table' (negative) or 'The patient could have taken an aspirin' (probability) would not be found in the foreground. Finally, background verbs appeared more often in dependent clauses suggesting that the more important information (e.g., the foreground) is presented in main clauses. It is interesting to note that a number of the dependent clauses used in the foreground were adverbial or adjectival clauses. Out of the 13% of dependent clauses in the foreground 9% of these were adverbial or adjectival clauses. By adverbial clauses, it is meant such clauses as:

"*As he stands up*, he sees the doctor coming up the stairs"

And adjectival:

"The butler runs into the room, *bumping into the other servant*".

This use of adverbial and adjectival clauses may have served to solve the problem of presenting two actions as occurring simultaneously. It is felt here that they are not a method of subordinating information, but rather a method of representing two clauses containing information of equal importance that occur simultaneously. Therefore, it makes sense that these two types of clauses would make up the majority of dependent clauses used in the foreground. There does, therefore, appear to be some difference between the foreground and background in terms of morphosyntactic markers although no distinctions are apparent between levels of foreground. Therefore, H_2 is not completely rejected. The suggestion that a distinction exists and may be marked between the foreground and background in a narrative is maintained.

5. CONCLUSIONS

5.1 Summary of Experiment and Results

This study tested the hypotheses that foregrounding in narrative was a function of the perception of movement or change in the stimulus and that this foregrounding could be marked in various ways. Each of these will be discussed in turn.

5.1.1 Foregrounding as a Function of Movement

In order to test the hypothesis that foregrounding is a reflection of movement in the stimulus (perceptual salience), all verbal units coding a movement or change in the video mentioned by a subject were identified and defined as the foreground. The frequency and types of verbs were compared between the two conditions: with and without soundtrack. It was expected that the 'without soundtrack condition' would do more visual foregrounding due to more attentional resources being free to devote to the visual array. In fact this was not found at all. There was no difference between the two condition groups in terms of overall frequency of mention and very little to no difference in terms of the specific actions and elaborations mentioned. Therefore, the first hypothesis was not supported by this experiment. In other words, it was not found that the group that both saw and heard the videotape did less visual foregrounding. This manipulation was included in this experiment in order to show that perceptual salience in a visual array would draw the attention and thus would be considered important to include in the narrative. If it were the case that this could be manipulated and reflected in the language in terms of the morphosyntactic markers, then the definition of the foreground as 'any mention of salient information in the visual array' could be supported.

Because the manipulation did not prove to be significant, a Response Coincidence Analysis together with a cluster analysis was then done to see if any

other groups could be identified in the data. The analysis did find two cluster groups which cut neatly across the two conditions. These clusters differed in terms of overall frequency of mention of foregrounded actions as well as the types of actions mentioned. In order to understand these cluster groups better, the clusters were compared to the results of a Visual/Verbal Questionnaire that subjects had completed. Three factors were significantly different between the two cluster groups: Use of Imagery, Speaking Fluency, and Lack of Language Facility.

These results suggest that the internal factors that a subject brings with him/her to an experiment may overshadow a more subtle independent variable. In this case, a number of subjects (randomly distributed across the two conditions) showed more willingness to give information than another group. This overshadowed the manipulation.

However, the fact that the manipulation did not produce significant results does not mean that the definition of foregrounding in this study should be abandoned. It is the belief here that the manipulation was at fault for the lack of results, not the operational definition of foregrounding. This seems to be supported by the other results of the study. If the operational definition of foregrounding is faulty, then why would there be such large differences between the cluster groups identified within the subjects and why would there be obvious differences in the use of particular morphosyntactic markers between the foreground and background? These questions cannot be answered conclusively here, but it is felt that the existence of these differences (between cluster groups and between foreground and background) is enough to support further research using this procedure.

5.1.2 Measuring Levels of Foregrounding

The second hypothesis suggested that foregrounding could be marked in a hierarchical fashion through various morphosyntactic devices. This was looked at by

dividing the frequency of mention for each condition into three even groups. It was suspected that if levels of importance were marked, then differences in morphosyntactic markers would be apparent between the higher frequency end and the lower frequency end. In fact, this was not found at all when observing tense, aspect, modality, use of copula verbs (particle), and clause type. Therefore, the hypothesis that the foreground may have several levels of importance is not supported in this study. This is not to say conclusively that there are no marked levels of foreground, but rather that no levels were observed in the data using this particular analysis. Levels might be found if a different approach was taken. For example, if the foreground was identified for each subject, using the procedure outlined in this thesis, and then if subjects were asked to place each event on a scale from least to most important, and markers observed, different results might emerge.

5.1.3 Differences between Foreground and Background

Finally, the same morphosyntactic markers were compared between all foreground verbs and a sample of background verbs. In this case differences were found. Foreground verbs were more often in the present tense than background verbs. Background verbs took the progressive aspect, used copula verbs and the irrealis mode more, and occurred in dependent clauses more than foregrounded verbs. These results are really the most important in the study. What is being said is that independent of manipulation effects or subject types, foreground, as identified operationally in this study, is in fact marked differently from the background. In a sense, these results validate the method of identifying foreground in the data. What has been done is that an information type has been identified independent of the syntax of the language, and this information seems to correspond roughly to the notion of foreground in the literature. Furthermore, this information correlates with the use of certain morphosyntactic devices. This corresponds to a

functional view of language in which this information type defined here as the foreground, is marked in certain ways by the speaker.

5.2 Implications for Future Research

This study is clearly an example of how subject internal factors may influence an experiment to the point where they nullify any manipulation effect. Therefore, studies must be done allowing for pre-screening of subjects using questionnaires such as the Visual/Verbal Questionnaire used in this study. In this way results could be found while holding certain individual differences constant.

As well, although the manipulation in this study did not result in any significant differences, this does not mean that the analytic procedure used was inadequate. The fact that foreground and background did differ morphosyntactically makes it likely that the procedure used was in fact valid, but the manipulation was not adequate. In future research, another manipulation might be tried, because until the use of foreground can be manipulated, any morphosyntactic correlations are just that: correlations. No causal connection can be implicated. Therefore, other ways must be thought of to manipulate subject's mention of visual foregrounding (i.e., movement). The next step in this analysis is to examine how individual morphosyntactic devices are used under varying conditions in order to get a more specific idea of why and how the foreground is marked morphosyntactically. As well, a more explicit account of the information contained in the background is necessary if it is to be compared to the foreground.

5.3 Conclusions

The real question is whether the notion of foreground as defined here is a psychologically valid one and this remains unanswered. This study found that no differences were observed in amount/type of foregrounding when a with/without soundtrack variable was manipulated in the stimulus. Although this does not

support the hypothesis that movement is reflected in narrative as the foreground, it does not disprove it either. As well, no support was found for the hypothesis that there are levels of importance marked morphosyntactically in narrative. Support was found for the differential marking of foreground and background in narrative through particles, modals, aspect, and clause type.

REFERENCES

Baker, W., Hogan, J., Rozsypal, A. (1988) Response Coincidence Analysis: a technique for assessing individual differences in response styles. *Journal of Phonetics*, 16, 401-416.

Bellan, S. (1989) *Clause and Information Type in English Narrative*. Master's Thesis. University of Alberta.

Bishop, R. (1979) Tense-Aspect in Totonac Narrative Discourse. In L.K. Jones (ed.), *Discourse Studies in Meso-American Languages*, Vol.I, 31-67. Dallas: Summer Institute of Linguistics.

Bower, T. (1982) *Development in Infancy*. San Francisco: Freeman.

Dik, S. (1980) *Studies in Functional Grammar*. London: Academic Press.

Goldstein, E. (1984) *Sensation and Perception*. Belmont: Wadsworth.

Grimes, J. (1975) *The Thread of Discourse*. The Hague: Mouton.

Haith, M. (1966) The response of the human newborn to visual movement. *Journal of Experimental Child Psychology*, 1966, 3, 235-243.

Hopper, P. (1979) Aspect and foregrounding in discourse. In T. Givon (ed.), *Discourse and Syntax*, Syntax and Semantics Vol. 12, 213-60. New York: Academic Press.

--------- and Thompson, S. (1980) Transitivity in grammar and discourse. *Language*, 56, 251-299.

Isenhour, J. (1975) The effects of context and order in film edition. *AV Communication Review*, 23, 69-80.

Jones, L. and Coleman, N (1979) Towards a discourse perspective of modes and tenses in Kickapoo narratives. In L.K. Jones (ed.), *Discourse Studies in Meso-American Languages*, Vol.I. Dallas: Summer Institute of Linguistics.

Jones, L. and Jones, L. (1979) Multiple levels of information in discourse. In L.K. Jones (ed.), *Discourse Studies in Meso-American Languages*, Vol.I. Dallas: Summer Institute of Linguistics.

Jones, L.B. and Nellis, D. (1979) A discourse particle in Cajonos Zapotec. In L.K. Jones (ed.), *Discourse Studies in Meso-American Languages*, Vol.I. Dallas: Summer Institute of Linguistics.

Labov, W. and Waletzky, J. (1967) Narrative analysis: oral versions of personal experience. In June Helm (ed.), *Essays on the Verbal and Visual Arts*. Seattle: University of Washington Press.

Longacre, R. (1985) Discourse peak as zone of turbulence. In Jessica Wirth (ed.), *Beyond the Sentence: Discourse and Sentential Form*. Ann Arbor: Karoma Publishers Inc.

---------- and Levinsohn, S. (1978) Field analysis of discourse. In W. Dressler (ed.), *Current Trends in Textlinguistics*. Berlin: Walter de Gruyter.

McArthur, H. (1979) The role of aspect in distinguishing Aguacatec discourse types. In L.K. Jones (ed.), *Discourse Studies in Meso-American Languages*, Vol.I. Dallas: Summer Institute of Linguistics.

Newtson, D. and Engquist, G. (1976) The perceptual organization of ongoing behavior. *Journal of Experimental Social Psychology*, 12, 436-450.

Paivio, A. and Harshman, R. (1983) Factor Analysis of a Questionnaire on Imagery and Verbal Habits and Skills. *Canadian Journal of Psychology*, 37, 461-483.

Reid, W. (1977) The quantitative validation of a grammatical hypthesis: the *passe simple* and the *imparfait*. *Papers of the Northeastern Linguistic Society*, 7.

Reinhart, T. (1984) Principles of gestalt perception in the temporal organization of narrative texts. *Linguistics*, 22, 779-809.

Shaw, R. and Hazelett, W. (1984) Schemas in Cognition. In V. McCabe and G. Balzano (eds.), *Event Cognition: An Ecological Perspective*, 45-58. Hillsdale, NJ: Lawrence Erlbaum.

Tomlin, R. (1985) Foreground-Background information and the syntax of subordination. *Text*, 5, 85-122.

Wallace, S. (1982) Figure and ground: the interrelationships of linguistic categories. In P. Hopper (ed.), *Tense-Aspect: Between Semantics and Pragmatics*. Amsterdam: John Benjamins.

Walrod, M. (1977) *Discourse grammar in Ga'dang*. Master's thesis. University of Texas at Arlington.

Waltz, N. (1976) Discourse functions of Guanano sentence and paragraph. In R. Longacre and F. Woods (eds.), *Discourse Grammar: Studies in Indigenous Languages of Columbia, Panama and Ecuador*. Dallas: Summer Institute of Linguistics.

APPENDIX A.1

Oxford Concordance Data

'Without Sound-Track' Condition

Subject

VF001 11

03 g man on a rickety bicycle rides upVX001 to a castle
04 a caricature of Albert Einstein, ridingVX001 very shakily up to the gate o
05 He stoppedVX001 before the drawbridge looked
06 He pullsVX001 up to a spot before a drawbrid
07 s with an apparently elderly man cyclingVX001 up to a castle
08 out with an old man on a bicycle ridingVX001 up to the drawbridge of a cas
16 vie, an elderly man on a bicycle cyclesVX001 up to the front of a castle
17 / He arrivesVX001 and entres the castle to mee
18 He comesVX001 to a drawbridge, stops, and ho
19 he movie begun with an older man ridingVX001 a bicycle up to a draw bridge
24 mpled clothing and thick glasses ridesVX001 his bicicle up to a castle moa

VF002 1

05 oppedVX001 before the drawbridge lookedVX002 up and yelled something, then

VF003 7

03 He honksVX003 his horn and the drawbridge lo
05 up and yelled something, then he tootedVX003 the horn on his bicycle and y
07 Upon arrival, he tootsVX003 his bicycle horn, and the draw
16 He honksVX003 the horn on his bicycle and as
18 X001 to a drawbridge, stops, and honksVX003 his bike horn twice
19 He beepedVX003 his bicycle horn and the draw
24 He honksVX003 a horn

VF004 10

03 X003 his horn and the drawbridge lowersVX004 and he ridesVX006 in
04 The drawbridge lowersVX004
05 The draw bridge cameVX004 down, he sort of jerkedVX005 th
06 The draw bridge comesVX004 thumping down, and almost knoc
07 ycle horn, and the drawbridge is loweredVX004 to allow him access
08 wbridge to be let down, which it isVX004
16 The drawbridge is then loweredVX004
18 The drawbridge comesVX004 down and the elderly gentleman
19 bicycle horn and the draw bridge openedVX004 for him
24 The drawbridge lowersVX004, and raisesVX007 while the ma

VF005 3

05 ridge cameVX004 down, he sort of jerkedVX005 the bike forward because he k
06 He catchesVX005 his balance and cyclesVX006
16 The elderly gentleman fumblesVX005 on his bicycle and then move

VF006 6

03 he drawbridge lowersVX004 and he ridesVX006 in
04 The man ridesVX006 across, and it is drawnVX007 u
06 He catchesVX005 his balance and cyclesVX006 inside
07 He proceedsVX006 inside
16 lesVX005 on his bicycle and then movesVX006 forward on to the drawbridge
18 4 down and the elderly gentlema bikesVX006 on

VF007 7

04 man ridesVX006 across, and it is drawnVX007 up immediately again
05 lf-way accross the drawbridge it wentVX007 up and the force caused him to
06 The drawbride starts closingVX007 while he's still on it, and
08 o start so that by the time they pullVX007 the bridge up again he is only
16 s still on the drawbridge, it is closedVX007 up, propelling him forward
19 cross the bridge, as it began to closeVX007
24 The drawbridge lowersVX004, and raisesVX007 while the man is riding the b

VF008 1

06 and when it finishes closing it shiftsVX008 forward and back a bit before

VF009 1

06 d and back a bit before it stops movingVX009 against the wall of stones

VF010 1

05 he tookVX010 a sip of something I think it w

VF011 6

05 Albert walked in or rather staggeredVX011, though I don't think he w
06 nite faced man in a white jacket showsVX011 the old man into a room where
07 The elderly man is escortedVX011 into the room by another ma
16 A servant bringsVX011 the elderly man into the room
17 es of too strong a prescription, entersVX011 the room, and needs to have h
24 The old man is guidedVX011 into a large room by someone

VF012 2

06 the man in the white suit jacket movesVX012 fast to keep him going the rig
18 The butler takesVX012 the elderly gentlmen to a desk

VF013 6

05 ith his hands in front of him he feltVX013 his way to the man with the ach

06 The old man looks at him and walksVX013 up to the table
07 he walksVX013 over to the table and attempts
16 g his briefcase, the elderly man fumblesVX013 nearsightedly for the table
17 he approchesVX013 his patient and tries to p
24 He approachesVX013 a long wooden table and m

VF014 1

24 hesVX013 a long wooden table and movesVX014 to set his briefcase on it, bu

VF015 8

06 He letsVX015 go of his case, to put it on th
07 ts to set down his case, instead dropsVX015 it on his foot
08 o the table which results in him droppingVX015 his bag on the floor
16 efcase on the table, but instead dropsVX015 it on his foot
17 is glasses, misses the table and dropsVX015 the bag on his foot
18 nd as he puts it on the desk, he dropsVX015 it on his foot
19 ontinued to be very clumsy as he droppedVX015 his medical bag on his foot
24 se on it, but miscalculates, and dropsVX015 the case on his foot

VF016 1

06 He howls and grabsVX016 his foot, hopping around like

VF017 1

07 who escorted the elderly man in, picksVX017 up the briefcase and setsVX018

VF018 3

06 he old man, I think the dentist, putsVX018 his case on the table and walks
07 picksVX017 up the briefcase and setsVX018 it on the table, then leavesVX0
16 The servant putsVX018 the briefcase on the table and

VF019 3

05 Albert sentVX019 the man in the white outfit awa
07 setsVX018 it on the table, then leavesVX019
16 briefcase on the table and then leaveVX019

VF020 3

05 man in the white outfit away and approachedVX020 Watson
06 sVX018 his case on the table and walksVX020 towards Mo to check on his pro
16 The elderly man then goesVX020 over to examine the man in the

VF021 1

06 He reachesVX021 Mo, and pokesVX022 his right

VF022 4

06 He reachesVX021 Mo, and pokesVX022 his right thumb into Mo's righ
07 atient's swollen jaw but instead pokesVX022 the suffering man in the eye
08 Soon after he pokesVX022 his patient in the eye
16 to examine him, the elderly man pokesVX022 him in the eye

VF023 1

06 The dentist goesVX023 back to his case, opensVX024 it

VF024 7

05 Albert openedVX024 his bag and went lookingVX025
06 tist goesVX023 back to his case, opensVX024 it, and tries to find certain
07 Now the dentist opensVX024 his briefcase and takesVX026 o
16 The old man then opensVX024 up his briefcase and removesVX
17 He opensVX024 the bag and removesVX026 some
18 the case on the desk and he then opensVX024 it
24 The old man opensVX024 his case and removesVX026 some

VF025 2

05 ert openedVX024 his bag and went lookingVX025 for instruments not trumpets
08 Right after that he fumblesVX025 in his bag and pullsVX026 ou

VF026 8

04 le before the man, and begins to takeVX026 various instruments out of it,
07 ist opensVX024 his briefcase and takesVX026 out a dentist's mirror and pic
08 t he fumblesVX025 in his bag and pullsVX026 out 2 dental instruments
16 opensVX024 up his briefcase and removesVX026 several instruments, takingV
17 He opensVX024 the bag and removesVX026 some dental tools to examine
18 He bringsVX026 out a dental mirror and a den
21 eanwhile, the doctor proceeds to unpackVX026 the contents of his brown bag
24 old man opensVX024 his case and removesVX026 some dentist's tools

VF027 1

06 At one point he liftsVX027 his glasses with one hand whil

VF028 6

04 He takesVX028 off his glasses for a moment a
06 Finally, he takesVX028 off his glasses
08 he then removesVX028 his coke-bottle glasses and
16 emovesVX026 several instruments, takingVX028 off his glasses to see them m
17 At this point, he removesVX028 his glasses when selecting h
24 the old man takesVX028 off his glasses, and moves to

VF029 3

06 He goesVX029 over to Mo with a longhandled a
17 He then approachesVX029 his patient, still clutch
19 The doctor approachedVX029 his patient and began to

VF030 1

05 ort of other tool, he had Watson openVX030 his mouth and Albert proceeded

VF031 3

19 edVX029 his patient and began to examineVX031 his mouth
21 He starts to examineVX031 the patient in order to dete
24 28 off his glasses, and moves to examineVX031 the man in black

VF032 1

06 PutsVX032 the mirror in and pokesVX034 wi

VF033 1

17 , still clutching his cheek, and looksVX033 into his mouth tappingVX034 th

VF034 9

05 is mouth and Albert proceeded to pokeVX034 one tooth and asked Watson if i
06 PutsVX032 the mirror in and pokesVX034 with the pick
07 He probesVX034 around in the patient's mouth
08 th the two dental instruments he pokesVX034 around until he finds the sore
16 ed by a dentist, the elderly man tapsVX034 different teeth
17 k, and looksVX033 into his mouth tappingVX034 the teeth in order to determ
18 He pokesVX034 around in the man's mouth, loc
19 He touchedVX034 each tooth with his instrume
24 He tapsVX034 two teeth, and the man in black

VF035 2

07 Twice the patient shakesVX035 his head, but with the third
24 .two teeth, and the man in black shakesVX035 his head

VF035A 1

07 Twice the patient shakesVX035a his head

VF036 6

05 another 'no' again then when he hitVX036 a 3rd tooth Watson almost hadVX0
08 reams with pain when the dentist hitsVX036 the tooth
16 When he tapsVX036 the painful one, the man in the
17 On his third attempt, he discoversVX036 the tooth, much to the pai
21 When the right tooth has been pokedVX036, the patient jerksVX037 upward
24 TappingVX036 a third tooth causes the man

VF037 5

05 tVX036 a 3rd tooth Watson almost hadVX037 a bird
06 Mo jumpsVX037 in his seat
07 h the third jab from the pick he writhesVX037 in agony
16 ainful one, the man in the chair jumpsVX037 up and yells in pain
21 has been pokedVX036, the patient jerksVX037 upward, and cries out in pain

VF038 4

05 Albert wentVX038 back into his bag and pulledVX0
07 The dentist then returnsVX038 to his case and removesVX039
08 The doctor returnsVX038 to his bag and pullsVX039 ou
17 The dentist then returnsVX038 to his bag and pullsVX039 ou

VF039 9

04 At last he takesVX039 out a large cotton pad and ind
05 wentVX038 back into his bag and pulledVX039 out what looked like a cross
06 The dentist pullsVX039 a large patch of wadding, abou
07 hen returnsVX038 to his case and removesVX039 a large piece of cotton batt
08 ctor returnsVX038 to his bag and pullsVX039 out a sheet of cotton balls, w
16 The old man then removesVX039 a pad of cotton wool or a ba
17 then returnsVX038 to his bag and pullsVX039 out a large piece of cotton wa
18 The old dentist then bringsVX039 out a large piece of cotton w
21 At this point the doctor removesVX039 a piece of white cloth from

VF040 1

19 So, he gaveVX040 the patient a cloth to cover hi

VF041 2

08 sheet of cotton balls, which he placesVX041 over the patient's entire fac
24 The old man coversVX041 the man in black's face with

VF042 7

03 ho appears to be the old dentist convincesVX042 the man in black to cover
04 The sufferer doesVX042 so, at which point the doctor p
06 ssion between the two, before Mo putsVX042 it on
08 ctor assures him and the patient returnsVX042 the sheet to his face
17 The patient reluctantly compliesVX042, uncertain of the dentist's
18 ge piece of cotton which the man putsVX042 over his face
21 y the patient, but eventually he doesVX042 as he is told

VF043 6

05 Albert lookedVX043 around the room walkedVX044 t
06 The dentist looksVX043 around, as though trying to fi
16 as his eyes covered, the old man looksVX043 around the room
17 ient's face covered, the dentist surveysVX043 the room in search of a club
18 The dentist then searchesVX043 for something to knock the
24 as his face covered, the old man searchesVX043 the room, then runsVX044 to

VF044 8

05 bert lookedVX043 around the room walkedVX044 to a wall behind where Watson
06 He goesVX044 over to some weapons on and aga
07 The dentist movesVX044 over to a nearby wall, picks u
08 The doctor scurriesVX044 around the room looking for
16 He dashesVX044 over to a wall and dragsVX048
19 his face was covered, hte doctor creptVX044 over to where a huge iron club
21 ly in the corner of the room and runsVX044 over to pick it up
24 man searchesVX043 the room, then runsVX044 to grab a large club that is ag

VF045 1

06 He grabsVX045 the straight haft of something

VF046 1

05 ind where Watson was sitting and pulledVX046 a large object away from the

VF047 1

05 it was very heavy and he was jerkedVX047 back at first because he coul

VF048 8

05 Albert draggedVX048 it so he was beside Watson w
06 He puts both hands on and dragsVX048 it to beside Mo
07 picks up a large, heavyclub and dragsVX048 it over towards the patient
08 He dragsVX048 this closer to the patient
16 e dashesVX044 over to a wall and dragsVX048 a large, heavy club over to th
17 , which he with great difficulty dragsVX048 across the floor to his patien
19 He draggedVX048 it over to his patient, as h
21 He slowly dragsVX048 it over to where the patient i

VF049 11

04 behind the patient's chair, and raisesVX049 it with great difficulty abov
05 Very slowly Albert liftedVX049 it over his right shoulder an
06 He slowly raisesVX049 it
07 He liftsVX049 it over his head with great ef
08 The doctor liftsVX049 the club over his head but it
16 The old man liftsVX049 the club up over his head appa
17 He liftsVX049 it above his head with great d
18 ds a very large mallet and as he raisesVX049 it over his head, is overcome
19 When he pickedVX049 up the huge club over his hea
21 he old doctor finally manages to liftVX049 the piece of metal
24 The old man raisesVX049 the club with great difficult

VF050 4

06 n on Mo's head when he starts to swingVX050 backwards -
08 his head but it is too heavy and pullsVX050 him back
16 man, but the weight of the club pullsVX050 him over
21 however, the weight of it carriesVX050 him backwards

VF051 1

06 He takesVX051 a few steps back, and he and t

VF052 12

03 him and the weight causes him to fallVX052 backwards down the stairs
04 is too heavy for the doctor - he fallsVX052 over backwards
05 ack it threw his off balance and toppledVX052 backwards down some stairs
06 steps back, and he and the mace fallVX052 down some stairs
07 b overwhelms the dentist, and he tumblesVX052 backwards down into a nearby
08 The dentist fallsVX052 down the stairs
16 He fallsVX052 backwards down a nearby stairw
17 s club wins out, and the dentist fallsVX052 backwards down a flight of sta
18 d, is overcome by the weight and fallsVX052 down a flight of stairs
19 As a result, the doctor fellVX052 backwards down the stairs, alon
21 He fallsVX052 backwards down a flight of sta
24 k, but becomes overbalanced, and fallsVX052 down some stairs

VF053 3

06 Mo jumpsVX053 up and wants to know what's ha
07 The patient leapsVX053 up and removesVX054 the cotton
16 he cotton wool from his eyes and standsVX053 up

VF054 5

04 The patient takesVX054 the cotton pad off and watches
05 Watson tookVX054 the 'insolation' off of his eye
07 The patient leapsVX053 up and removesVX054 the cotton from his face
16 e chair, upon hearing the noise, removesVX054 the cotton wool from his eye
21 UncoveringVX054 his face his patient ques

VF054A 1

17 patient, startled with the noise looksVX054a up as the old man comesVX055

VF055 7

04 es in astonishment as the doctor picksVX055 himself up off the floor
05 is eyes and looked to see Albert crawlingVX055 slowly up the stairs
07 Now the dentist climbsVX055 up and returnsVX056 to his br
08 When he climbsVX055 up again there is some discus
16 The old man climbsVX055 back up the stairs, and remar
17 se looksVX054a up as the old man comesVX055 up the stairs
24 The old man climbsVX055 back up and speaks to the man

VF056 5

05 Albert then wentVX056 to his bag and brought out a co
07 w the dentist climbsVX055 up and returnsVX056 to his briegcase, removing a
08 At this point the doctor returnsVX056 to his bag and pulls out a o
18 The dentist returnsVX056 and decides to use laughing
21 Next the old doctor returnsVX056 to his bag and pulls out a m

VF057 5

05 Albert turnedVX057 it on and a gush blewVX058 in
06 He checks it out, gets it to workVX057, and takesVX060 a few experimen
08 The doctor turnsVX057 on the gas and takesVX060 a fe
16 He turnsVX057 the gas on, rather suddenly an
24 He turnsVX057 the gas on, and is startled at

VF058 1

05 ert turnedVX057 it on and a gush blewVX058 in his face and caused him to j

VF059 1

05 58 in his face and caused him to jumpVX059

VF060 11

04 He breathesVX060 some of its air and then ma
05 He breathedVX060 it in for a bit then tookVX
06 t out, gets it to workVX057, and takesVX060 a few experimental whiffs
07 He breathesVX060 in some gas, then administe
08 doctor turnsVX057 on the gas and takesVX060 a few whiffs just to make sure
16 the gas on, rather suddenly and inhalesVX060 the gas a few times
17 He first samplesVX060 it himself, and confident of
18 However, he sniffsVX060 in the gas too, and soon both
19 He started to sniffVX060 it and enjoyed the feeling it
21 He testsVX060 the mask and smiles, Yes I gue
24 led at first, but then begins to breatheVX060 deeply and smile

VF061 3

05 eathedVX060 it in for a bit then tookVX061 it to Watson who tookVX062 deep
06 He takesVX061 it to Mo
16 He then takesVX061 it over to the man in the chai

VF062 9

04 s air and then makes the patient inhaleVX062 as well
05 then tookVX061 it to Watson who tookVX062 deep breath fulls
07 breathesVX060 in some gas, then administersVX062 some to the patients
08 He then putsVX062 the mask to the patien for him
16 man in the chair and gets him to takeVX062 a few sniffs of the gas
17 nd confident of it's potency, he givesVX062 it to his patient
19 He sharedVX062 the mask with his patient
21 He usesVX062 this mask on his patient
24 He givesVX062 some gas to the man in black,

VF063 3

05 then Albert tookVX063 a breath then 3 more for Watson
06 Doc shows Mo it's okay by takingVX063 another whiff
24 as to the man in black, and then takesVX063 more forhimself

VF064 2

05 en 3 more for Watson then Albert breathedVX064 some more and really this i
06 Mo changes his mind and breathesVX064 it in like he's told

VF065 1

05 Laughingly, he pointedVX065 to Watson

VF066 2

16 The old man then goesVX066 back to his briefcase and pulls
17 The dentist then returnsVX066 to his bag, and getsVX067 a

VF067 7

05 Albert went into his bag and pulledVX067 out what looked like a small
06 Doc getsVX067 some pliers and sitsVX069 on th
07 The dentist removesVX067 a pair of pliers and gesture
16 sVX066 back to his briefcase and pullsVX067 out a pair of pliers and shows
17 hen returnsVX066 to his bag, and getsVX067 a pair of pliers in order to ex
18 The dentist getsVX067 his tooth extractor and starts
24 The old man takesVX067 some dentist tools and tries t

VF068 2

07 emovesVX067 a pair of pliers and gesturesVX068 to the patient, as if to sa
16 lsVX067 out a pair of pliers and showsVX068 them to the other man

VF069 3

05 he satVX069 on the table directly in front o
06 Doc getsVX067 some pliers and sitsVX069 on the table in front of Mo
16 Still laughing, the old man sitsVX069 down on the table facing the ma

VF070 6

05 They swayedVX070 together
16 Both man rockVX070 back and forth, still laughing
17 ich he had with him and tried to extractVX070 the tooth
18 is tooth extractor and starts to pullVX070 the tooth but with no success
19 s mouth, the doctor attempted to pullVX070 the tooth once more
24 some dentist tools and tries to pullVX070 a tooth from the man in black's

VF071 7

04 atly dressed in a white suit has enteredVX071 the room with a basin of wat
05 at this time one of the interns cameVX071 in with a steel basin of water
06 man in the white suit jacket has returnedVX071, with a metal bowl of water
07 e meantime, another man in white entersVX071 the room, carrying a bowl of
16 Meanwhile another servant has enteredVX071 carrying a basin of water
17 A servant entresVX071 holding a stainless steel bow
24 The man in the blue smock has reenteredVX071 the room, carrying a large

VF072 1

08 rs is unsuccessful so the doctor climbsVX072 up on the table, sitsVX073 on

VF073 4

04 He sitsVX073 on the table facing the patient
08 tor climbsVX072 up on the table, sitsVX073 on the end facing the patient a
18 So the dentist sitsVX073 on the desk and putsVX074 one f
24 The old man sitsVX073 on the table in front of the ma

VF074 9

04 He placesVX074 both feet on the patient's sh
06 out pulling Mo's tooth, and then putsVX074 one foot one each of Mo's shoul
07 Finally, he plantsVX074 his feet on the patient's che
08 n the end facing the patient and putsVX074 his feet on the patients chest
16 ut, the older man still laughing bracesVX074 his feet against the shoulder
17 the dentist placedVX074 his feet on his patient's sho
18 entist sitsVX073 on the desk and putsVX074 one foot on the man's one shoul
21 Finally, the doctor straddlesVX074 the patient's shoulders wi
24 le in front of the man in black, placingVX074 his feet on the man in black

VF075 1

24 The old man reachesVX075 forward and pullsVX077 very

VF076 1

16 A[redacted]gVX076 the pliers to a tooth, the

[redacted]77 7

06 He pullsVX077, and pulls, and fliesVX079 ont
07 feet on the patient's chest, and yanksVX077 hard, pullingVX078 out a tooth
08 Now he tries to pullVX077 the tooth again
16 e pliers to a tooth, the old man pullsVX077 and is rewarded as a tooth c[redacted]
17 t's shoulders and again tried to pullVX077 the tooth
18 on the man's other shoulder and pullsVX077 hard
24 old man reachesVX075 forward and pullsVX077 very hard on the man in black'

VF078 10

03 Both high, the dentist removesVX078 the mans problem tooth, fall
04 after a few experimental tries, yanksVX078 out one of his teeth, fallingV
05 back to Albert and the pliers he pulledVX078 very hard one last time and b
07 nt's chest, and yanksVX077 hard, pullingVX078 out a tooth, and crashingVXC
08 When the tooth comesVX078 out the doctor fallsVX079 off

16 VX077 and is rewarded as a tooth comesVX078 out, causing him to fallVX079
17 He managed to pullVX078 the tooth out, but he fellVX079
18 The tooth comesVX078 out and the dentist fallsVX079
21 nt's shoulders with his feet and yanksVX078 out a tooth on his second try
24 The tooth finally comesVX078 free, and the old man fallsVX0

VF079 10

03 vesVX078 the mans problem tooth, fallsVX079 over backwards in the attempt,
04 yanksVX078 out one of his teeth, fallingVX079 over backwards again on to t
05 use it was with so much force he didVX079 a backwards roll right off of th
06 He pullsVX077, and pulls, and fliesVX079 onto the floor
07 d, pullingVX078 out a tooth, and crashingVX079 to the floor
08 tooth comesVX078 out the doctor fallsVX079 off the table
16 h comesVX078 out, causing him to fallVX079 backwards off the table
17 pullVX078 the tooth out, but he fellVX079 back over the table behind him
18 h comesVX078 out and the dentist fallsVX079 over
24 comesVX078 free, and the old man fallsVX079 off the table

VF080 7

04 When the doctor getsVX080 up this time, his nose is just
05 When he gotVX080 up what used to be the top of hi
06 He comesVX080 up from the floor, with the to
08 When he heavesVX080 himself up again - the nose i
17 men still laughing, the dentist emergesVX080 from behind the table, but h
18 ave been a fake, because when he looksVX080 up, his nose is coming off
24 When he pullsVX080 himself up, his nose has almos

VF081 3

04 shrieks, still laughing, and he pointsVX081 to the remains of the nose on
16 aughing and the man in the chair pointsVX081 to the old man's nose, noting
17 His patient pointsVX081 this out in fit of laughter

VF082 1

05 ling himself laughing and Albert breathedVX082 in another shot of gas, the

VF083 2

08 The doctor picksVX083 up a mirror and pushesVX085 hi
17 The dentist getsVX083 one of his mirrors and tries to

VF084 3

04 The doctor looksVX084 at himself in a pocket mirror,
05 082 in another shot of gas, then lookedVX084 into a mirror and pushedVX085

19 The doctor lookedVX084 in a mirror and reshapedVX085

VF085 8

04 ocket mirror, laughs merrily and squishesVX085 all of the nose back togeth
05 en lookedVX084 into a mirror and pushedVX085 his nose up, which made it lo
06 Doc laughs, and pushesVX085 it back on so it looks more l
08 octor picksVX083 up a mirror and pushesVX085 his nose in
16 The old man then squishesVX085 the makeup back on to his n
17 one of his mirrors and tries to fixVX085 his nose, and both men continue
19 ctor lookedVX084 in a mirror and reshapedVX085 his nose
24 He makesVX085 a pig's snout from the remnant

VF086 1

16 funny, that the man in the chair fallsVX086 out of his chair laughing

VF087 10

04 oor bursts open and a fourth man rushesVX087 into the room
05 ghing histarically, a 2nd intern ranVX087 into the room
06 Another man in a white jacket bargesVX087 into the room, knockingVX089
07 Another man intersVX087 the room, and the dentist beg
08 Suddenly another man comes rushingVX087 into the room, brushingVX089
16 Another servant dashesVX087 through the doorway of the ro
17 Then another servant comes rushingVX087 into the room to check on hi
19 At this time, a messenger burstedVX087 through the door to tell the
21 A second household help entersVX087 the room tripsVX089 over the
24 A man in a white smock runsVX087 into the room, sending the man

VF088 1

07 an who has just entered the room runsVX088 toward the dentist, knockingVX0

VF089 6

05 he ranVX089 into the 1st intern and sendingV
06 acket bargesVX087 into the room, knockingVX089 over the butler-type
07 om runsVX088 toward the dentist, knockingVX089 the man holding the bowl ov
08 omes rushingVX087 into the room, brushingVX089 by the butler and spillingV
16 through the doorway of the room, knockingVX089 the servant carrying the ba
21 sehold help entersVX087 the room tripsVX089 over the first butler and fall

VF090 4

05 ranVX089 into the 1st intern and sendingVX090 the water, basin and towel f
08 brushingVX089 by the butler and spillingVX090 the basin
17 past the servant already there, knockingVX090 the bowl of water out of hi

24 ing the man in blue's metal bowl flyingVX090

VF091 1

07 room, and the dentist begins to crawlVX091 towards the door

VF092 4

04 Anyway, he runsVX092 over to the patient, who says a
05 He ranVX092 to Watson's side Watson was on h
06 He goesVX092 to Mo and says something about
08 He runsVX092 up to the patient and whispers

VF093 1

16 He kneelsVX093 and says something to the man

VF094 2

16 He findsVX094 a small mirror and looksVX095
21 The patient then grabsVX094 a mirror, convienently placed

VF095 3

05 Watson lookedVX095 into a small compact mirror a
07 The patient looksVX095 in a small mirror, realizes th
16 He findsVX094 a small mirror and looksVX095 at his tooth

VF096 4

04 He pointsVX096 to the first doctor, who is m
07 He continues to laugh, and pointsVX096 toward the dentist
17 He pointsVX096 to the dentist, who it appear
24 The man in black pointsVX096 at the old man, who runsVX099

VF097 1

06 Doc wavesVX097 'goodbye' from the door, laugh

VF098 1

17 As the dentist stumblesVX098 to the door, laughing, his

VF099 8

03 s crooked smile, and the dentist wandersVX099 out the door, with some othe
04 X096 to the first doctor, who is makingVX099 a nimble getaway through anot
05 Albert had already ranVX099 out the door and closedVX100 it
07 aseVX101 after the dentist as he exitsVX099 through a door
08 The doctor is too quick and runsVX099 out of the room
17 The dentist manages to getVX099 out the door and closeVX100 it b
19 et out of there to be safe so he stumbledVX099 out the door, but still lau
24 pointsVX096 at the old man, who runsVX099 through a door and closesVX100

VF100 4

05 lready ranVX099 out the door and closedVX100 it by the time the 2 interns
16 e sequence ends when the old man closesVX100 and locks the door to bar the
17 ges to getVX099 out the door and closeVX100 it behind him
24 who runsVX099 through a door and closesVX100 it behind him

VF101 6

03 e door, with some others quickly rushingVX101 behind him, evidently upset
04 e fourth man and the butler both runVX101 up to the door as if to break it
07 Now both men chaseVX101 after the dentist as he exitsV
16 an in the chair, while laughing, sendsVX101 his servants after the old man
18 wrong tooth and send the butler fleeingVX101 after the clumsy doctor
21 his sends the two household help chasingVX101 the old doctor out of the ro

APPENDIX A.2

Oxford Concordance Data

'With Sound-Track' Condition

Subject

VF001 10

02 He clumsily drivesVW001 up to the castle on a bicycle
09 the exerpt ? a man on a bicycle arrivesVW001 at a castle honksVW003 his h
10 One scene of the movie a man ridesVW001 up to a forttress wall in a ol
11 He comesVW001 to a drawbridge and honks the
12 The bicycle grindsVW001 to a halt and the old man who
13 He stopsVW001 before the draw-bridge and hon
14 The clip began with an old man ridingVW001 up to a castle on an old bicy
15 He comesVW001 to a drawbridge and honksVW003
22 ike which he soundsVW003 when he arrivesVW001 at the front of the castle
23 An old man ridesVW001 up to a castle on an old bicyc

VF003 10

02 p to the castle on a bicycle and honksVW003 an old style horn
09 bicycle arrivesVW001 at a castle honksVW003 his horn to tell the people in
10 It's an old man and he honksVW003 his horn and says he is Dr. Sh
11 01 to a drawbridge and honks the hornVW003 on his bike
12 who looks sort of like einstien soundsVW003 a horn on the bike and calls
13 VW001 before the draw-bridge and honksVW003 the horn on his bicycle
15 e comesVW001 to a drawbridge and honksVW003 his horn
20 As he approaches a castle he honksVW003 his brass bicycle horn and cal
22 e is a horn on the bike which he soundsVW003 when he arrivesVW001 at the f
23 o a castle on an old bicycle and beepsVW003 his horn a couple of times

VF004 12

01 The drawbridge is loweredVW004 and he starts to bikeVW006 a
02 The gate lowersVW004 and he drivesVW006 onto it
09 The drawbridge lowersVW004 and he drivesVW006 over it
10 r something and a bridge door is letVW004 down for him to come in
11 The drawbridge is loweredVW004 and he shakily ridesVW006 hi
12 The draw bridge lowersVW004 quickly much to the surprise
13 n he gives it, the drawbridge is loweredVW004 for him
14 The draw bridge was loweredVW004 and he rodeVW006 in
15 The drawbridge is letVW004 down, and he startsVW006 across
20 The drawbridge is loweredVW004 and he proceedsVW006 across
22 The door opensVW004
23 a greeting and the drawbridge is letVW004 down

VF006 10

01 is loweredVW004 and he starts to bikeVW006 across
02 The gate lowersVW004 and he drivesVW006 onto it
09 he drawbridge lowersVW004 and he drivesVW006 over it
11 e is loweredVW004 and he shakily ridesVW006 his bike across, while the dra
12 rise of the Dr. and he crookedly drivesVW006 over the bridge
13 He begins to pedalVW006 into the castle, but he barely

14 w bridge was loweredVW004 and he rodeVW006 in
15 wbridge is letVW004 down, and he startsVW006 across
20 rawbridge is loweredVW004 and he proceedsVW006 across it
22 door starts to closeVW007 as he ridesVW006 across, forcing him off the do

VF007 11

01 way across, the bridge starts to liftVW007 and the guy Dr from the village
02 The gate raisesVW007 before he was through
10 Just as he's over the bridge, it risesVW007 again and so he's is speeding
11 ike across, while the drawbridge closesVW007 with him riding across it
12 Suddenly, the drawbridge retractsVW007 as fast as it lowered, send
13 the draw-bridge when it is being raisedVW007 again
14 oss; however, the drawbridge was raisedVW007 again, projecting the doctor
15 the drawbridge starts to comeVW007 up before he is quite over
20 long the drawbridge it starts to goVW007 back up therefore making his bicy
22 es across and the door starts to closeVW007 as he ridesVW006 across, forci
23 castle, the drawbridge begins to liftVW007 and there is a great clatter as

VF011 11

01 He is announced and he entersVW011 the room
02 When he enteredVW011 the den he was ledVW012 to t
09 When he entersVW011 a room in the castle we find
10 into the wrong direction when he entersVW011 the room and when he comesVW0
11 The doctor entersVW011 the castle and the patient is
12 The doctor is letVW011 into what looks like a large ban
14 The doctor was broughtVW011 into a large room by a serva
15 The doctor entersVW011 a room in which is sitting a
20 Then the doctor comesVW011 in with the servant and the se
22 The Dr. comesVW011 in, staggering and tripping ov
23 He is shownVW011 into a large room by a butler

VF011A 4

01 aybe because of them, the Doctor stumblesVW011a around like he's blind
10 The doctor can't see and goesVW011a off into the wrong direction w
12 doctor looking around confused, makingVW011a an abrupt turn toward one of
20 hen the doctor hears his name he walksVW011a around confused saying Where?

VF012 4

02 n he enteredVW011 the den he was ledVW012 to the patient by another man
12 The servant direc[illegible]W012 him toward a large banquet t
14 aid Where? Where?, and had to be guidedVW012 to the patient
20 The servant then guidesVW012 the doctor towards the man si

VF013 6

09 When he movesVW013 towards the patient we see tha
10 entersVW011 the room and when he comesVW013 closer to the man with the too
11 The doctor tries to walkVW013 over to the table and stumbles
12 The doctor stumblesVW013 over to the table apparentl

13 ssured that he is the doctor, he stumblesVW013 to the table where the lord
23 s to have a problem seeing as he walksVW013 to the table quite cautiously

VF013A 1

11 The doctor reachesVW013a the table and goes to put h

VF015 6

01 table, but misses the table and dropsVW015 it on his foot
10 ase on the table, but misses and dropsVW015 it on his foot
12 The heavy-sounding bag fallsVW015 to the floor and lands on the
14 o put his case on the table, but droppedVW015 it on his foot
15 The doctor dropsVW015 his bag on his floor
23 Once at the table, he dropsVW015 his briefcase, but it instead

VF015A 2

01 After hoppingVW015a around in pain, he proceeds
22 He then stumblesVW015a around in agony

VF016 1

12 The doctor cries out and grabsVW016 his foot as the servant tries

VF019 4

10 Just before this the servant is sentVW019 out for hot water! towels and t
14 The patient sentVW019 Harry, the servant, to get hot
15 The servant leavesVW019 after being told to lock the
20 water and towels and the servant leavesVW019

VF019A 1

12 e old german doctor echoes as he fumblesVW019a through his bag

VF020 2

12 The doctor startsVW020 toward the man
13 The doctor then goesVW020 to his patient, barely finding

VF021A 1

13 block his vision, and begins to examineVW021a the patient

VF022 4

12 lem he inquires as he accidently pokesVW022 his finger in the man's eye
13 ut, since he cannot see well, he pokesVW022 the man's eye, who cries out i
14 istance he found the patient and pokedVW022 him in the eye
22 The Dr, because he is a clutz, hitVW022 the man in the eye while checkin

VF024 3

11 bag now on the table, the doctor opensVW024 it up and searchesVW025 throug
13 Next the doctor openedVW024 his case and tookVW026 out so
20 Then the doctor opensVW024 his bag and trys to locateVW02

VF025 5

11 the doctor opensVW024 it up and searchesVW025 through his tools
12 The doctor then fumblesVW025 in his bag trying to see the
14 He found his case and pawedVW025 through it, finally settingVW0
15 The dentist looksVW025 in his bag for the right equip
20 r opensVW024 his bag and trys to locateVW025 his equipment

VF026 6

10 Anyway, the doctor pullsVW026 out his tools but he can't see
11 He picksVW026 a dentist's mirror and another
12 emovedVW028 the useless glasses, locatingVW026 a mirror and dental pick, l
13 doctor openedVW024 his case and tookVW026 out some instruments and procee
20 Finally he pullsVW026 them out, goesVW029 to the man
23 After gaining his composure, he getsVW026 out his tools - a mirror and a

VF028 5

10 n't see which one he wants so he takesVW028 off his glasses
11 He finally takesVW028 off his glasses to see the too
12 The doctor having removedVW028 the useless glasses, locatin
14 d pawedVW025 through it, finally settingVW028 aside the thick glasses that
15 t see through his glasses, so he takesVW028 them off

VF029 3

11 st's mirror and another tool and goesVW029 over to the patient
15 He then approachesVW029 the patient with his dent
20 Finally he pullsVW026 them out, goesVW029 to the man sitting in the chair

VF031 5

01 a around in pain, he proceeds to examineVW031 the patient
09 The doctor next begins to examineVW031 the patient to find out whic
10 So, the doctor looksVW031 in the mans mouth and pokesVW0
12 gVW026 a mirror and dental pick, looksVW031 into the patient's mouth
13 ome instruments and proceeded to findVW031 the delinquent tooth

VF034 7

02 he dentist examines his teeth by pushingVW034 on them with some sort of in
10 looksVW031 in the mans mouth and pokesVW034 around to see which tooth is h
11 He then tapsVW034 on the patient's teeth and asks
12 Is it this one? he pokesVW034
14 He tappedVW034 some of the patient's teeth a
20 ing in the chair and proceeds to tapVW034 his teeth to determine which too
23 The dentist tapsVW034 the other man's teeth until he

VF035 1

12 The man shakesVW035 his head

VF035A 1

12 He shakesVW035a his head

VF036 6

01 After findingVW036 the painful tooth he is aske
13 Finally he found the tooth by hit ingVW036 it with his instrument, whic
14 The naughty one was locatedVW036
15 He hitsVW036 the right one on the third try
20 As he hitsVW036 the hurt tooth the man in the c
23 4 the other man's teeth until he findsVW036 the one that hurts

VF037 1

20 the man in the chair screams and jumpsVW037 up

VF038 1

20 The doctor goesVW038 back to his bag to prepare to p

VF038A 1

09 doctor appears confused until he searchesVW038a in his medical bag and fin

VF039 6

09 hesVW038a in his medical bag and findsVW039 a cotton cloth
12 The doctor retrievesVW039 some anesthetic cotton fro
13 ctor agreed and from his case he tookVW039 out a big cotton pad and told h
14 The doctor pulledVW039 a cotton pad from his case an
15 ks to be put out, and the doctor pullsVW039 out a piece of what he calls a

23 Once he does, he retrievesVW039 from his bag a large swatc

VF040 5

10 He givesVW040 the man a wad of blanket-cotto
11 eem to know what he is doing and givesVW040 a large piece of cotton battin
20 The doctor panicks and givesVW040 him a peice of cotton and tell
22 doesn't have a clue what to do, givesVW040 him a large piece of guaze and
23 The dentist givesVW040 the cotton pad to the man and

VF041 1

12 n the eyes the doctor instructs, forcingVW041 the cotton over the man's en

VF042 6

01 The doctor makes him coverVW042 his eyes with anesthetic cotto
02 d this by getting the patient to holdVW042 a cotton cloth over his head wh
10 The man putVW042 it on and then the doctor looksV
12 The man compliesVW042 reluctantly
14 The patient compliedVW042, telling the doctor to hurr
15 over his eyes, which the patient doesVW042, while the doctor looksVW043 ar

VF043 5

10 tVW042 it on and then the doctor looksVW043 around and runsVW044 The man i
12 e doctor trails, as he nervously looksVW043 around spying a large studded
13 At the same time he was lookingVW043 around to find something tha
15 ient doesVW042, while the doctor looksVW043 around the room
20 Then the doctor looksVW043 around the room for something

VF044 5

09 The doctor then movesVW044 to the back of the room, away
10 the doctor looksVW043 around and runsVW044 The man is always telling him t
11 The doctor then walksVW044 over to a very large and heavy
14 The doctor wentVW044 to a weapons display on the wal
23 n's face is covered, the dentist goesVW044 across the room to where some r

VF045 2

01 eyes with anesthetic cotton and grabsVW045 a medieval mace
02 After his eyes were covered, he grabbedVW045 a huge bludgeon to hit his h

VF048 8

09 He proceeds to dragVW048 this object to where the patien

11 He dragsVW048 it over to the patient and lif
12 he doctor can barely lift it and dragsVW048 it across the floor
13 he could not lift it, and had to dragVW048 it across the room
14 weapons display on the wall and draggedVW048 a huge club back to the tabl
15 a large hammer-type object - and dragsVW048 it across the room
20 instrument over near a wall and dragsVW048 it over to the man
23 He dragsVW048 a large weapon back over to th

VF049 10

01 He raisesVW049 it above his head in order to
09 ject to where the patient is and raisesVW049 it painstakingly over his hea
11 VW048 it over to the patient and liftsVW049 it very slowly in the air, sin
12 The doctor raisesVW049 the huge mace with difficulty
13 He succedVW049, but as soon as it was over
14 He heftedVW049 the club over his head to hit
15 The doctor attempts to liftVW049 the hammer, apparently to hit t
20 The doctor then tries to liftVW049 this heavy thing up to hit the
22 However, when he liftsVW049 the obj over his head to prepa
23 As the dentist responds, he liftsVW049 the weapon over his head as if

VF050 6

01 bonk the guy but it's too heavy, pullsVW050 him backwards and down a stair
11 But the club is so heavy that it fallsVW050 behind the doctor before he ha
13 t was over his head, it began to pullVW050 him back and it just so happene
14 t was too heavy and the momentum carriedVW050 it back, causing the doctor
15 nt over the head with it, but is pulledVW050 over backward by its weight,
20 is the instrument is so heavy it pushesVW050 him backward and he fallsVW05

VF052 11

02 , but couldn't lift it and so he fellVW052 down the stairs instead
09 e doctor to lose his balance and fallVW052 backwards down a flight of stai
10 ng this mallet over his head, he fallsVW052 back down these stairs that di
11 led backwards by the heavy club, fallsVW052 down a set of stairs that just
12 The weight throwsVW052 him backward down a strategic
13 as a staircase behind him and he fellVW052 down the stairs with a big cras
14 0 it back, causing the doctor to tumbleVW052 down a flight of stairs
15 over backward by its weight, and fallsVW052 down some stairs that are loca
20 pushesVW050 him backward and he fallsVW052 down the stairs that are behin
22 o prepare to hit the man, the Dr fallsVW052 backwards down some stairs - c
23 to the weight of the weapon, he fallsVW052 down a staircase behind him

VF053 4

10 an takesVW054 the cotton off and standsVW053 to look down the stairs and a
13 Not seeing the doctor, he gotVW053 up and went to the stairs from w
14 patient removedVW054 the pad and gotVW053 to his feet as the doctor stagge
20 the noise, the man in the chair jumpedVW053 up and asked what happened

VF054 5

09 When the patient hears this, he removesVW054 the cotton cloth from his ey
10 The man takesVW054 the cotton off and standsVW053
13 he noise prompted the patient to removeVW054 the anastheitic cotton from h
14 The patient removedVW054 the pad and gotVW053 to his
22 The man uncoversVW054 his eyes and asks what happ

VF054A 2

11 Hearing the crash, the patient looksVW054a up from the cotton and sees t
13 theitic cotton from his eyes and lookVW054a around

VF055 6

11 tton and sees the doctor, dazed, walkingVW055 back up the stairs
12 The doctor stumblesVW055 up from the stairs
13 rom where his physician began to emergeVW055
14 tVW053 to his feet as the doctor staggeredVW055 up the stairs, complaining
15 He comesVW055 back up the stairs, muttering
20 After the doctor getsVW055 up he walksVW056 back over to h

VF055A 1

14 The patient satVW055a down again and pleaded with the

VF056 5

09 The doctor walksVW056 over to the table by which the
10 The doctor then goesVW056 to his kit and brings out the l
11 The doctor then goesVW056 back to his bag and finds a pre
13 Then he wentVW056 to his case and started looking
20 After the doctor getsVW055 up he walksVW056 back over to his bag and start

VF057 6

01 finds a Nitrous Oxide tank, and turnsVW057 it on, takesVW060 a whiff
11 He then turnsVW057 it on and a blast of the gas g
13 He openedVW057 the valve and inhaledVW060 th
14 He turnedVW057 the lever and gas hissedVW058
15 ow locates a nitrous oxide mask, turnsVW057 it on, and begins to inhaleVW0
23 The dentist turnsVW057 it on and takesVW060 a couple

VF058 3

11 057 it on and a blast of the gas goesVW058 in his face

14 He turnedVW057 the lever and gas hissedVW058 out
20 of laughing gas and accidentally spraysVW058 some into his own face

VF059 1

14 ughed continuously as the doctor satVW059 on the table in front of the pat

VF060 11

01 xide tank, and turnsVW057 it on, takesVW060 a whiff
02 The dentist starts snortingVW060 the stuff and then givesVW0
09 He takesVW060 a few whiffs and finding it to
10 He sniffsVW060 it first and ends up all gigg
11 The doctor breathesVW060 the gas a couple of times a
12 2 Nitrous oxide from his bag and sniffsVW060 it
13 He openedVW057 the valve and inhaledVW060 the gas
14 he doctor replied yes, very good sniffingVW060 the gas
15 turnsVW057 it on, and begins to inhaleVW060
20 After he takesVW060 a few sniffs the man with the
23 The dentist turnsVW057 it on and takesVW060 a couple of deep breaths

VF060A 2

13 at was good as an anasthetic, he inhaledVW060a the has again and replied y
15 He starts laughing, and inhalesVW060a several more times before h

VF061 1

13 He then wentVW061 over to his patient to inhale s

VF062 10

01 He givesVW062 the patient a couple of whiffs
02 snortingVW060 the stuff and then givesVW062 it to the patient and they bot
09 to work quite well, proceeds to administerVW062 some to the patient
10 all giggly and then has the man sniffVW062 some
11 He then givesVW062 some to the patient and then m
12 ffirmation, and lets the patient breatheVW062 from the bottle
14 The doctor began laughing and gaveVW062 some to the patient
15 VW060a several more times before holdingVW062 it to the patient's face, af
20 Then the doctor givesVW062 the patient some, givesVW063 h
22 He then givesVW062 some to the man who begins to

VF063 2

01 the patient a couple of whiffs, takesVW063 a few more, and both guys are
20 tor givesVW062 the patient some, givesVW063 himself some more and then the

VF064 2

12 is so funny and lets his patient sniffVW064 the laughing gas again
14 bout? demanded the patient sniff sniffVW064

VF067 6

01 Then the doctor grabsVW067 pliers and tries to pullVW070
09 The doctor findsVW067 a pair of plyers in his medica
11 The doctor then pullsVW067 out a pair of pliers and tries
12 laugh hysterically as the doctor producesVW067 a pair of pliers to pull th
14 rns sniffing and then the doctor tookVW067 up his pliers
23 The dentist pullsVW067 a pair of pliers out of his ba

VF068A 1

12 He staggersVW068a over to sitting man who is

VF070 10

01 r grabsVW067 pliers and tries to pullVW070 the tooth
09 his medical bag and attempts to pullVW070 the tooth out
10 ttempt with some house plyers to takeVW070 out a tooth
11 ut a pair of pliers and tries to pullVW070 the patient's tooth
12 ically cracking up, and tries to yankVW070 the tooth in a drunken fashion
13 k in place and then proceeded to pullVW070 the aching tooth
14 and towels, as the doctor tried pullingVW070 the tooth
20 Then the doctor tries to pullVW070 the tooth, laughing at the same
22 Dr. then attempts to pullVW070 the tooth, but initially can't
23 He then tries to pullVW070 the patient's sore tooth but ha

VF071 4

10 re laughing away and the servant comesVW071 in with towels and water and j
14 Harry returnedVW071 with the water and towels,
15 is is going on, the male servant reappearsVW071 with a bowl of water carri
23 The patient's butler had returnedVW071 with the hot water and towe

VF073 4

10 So, he sitsVW073 on the desk in front of the man
11 says he needs more leverage and sitsVW073 on the table and putsVW074 both
12 The doctor sitsVW073 on the table opposite the man l
13 He satVW073 on the table in front of his pat

VF074 10

01 He repositionsVW074 himself, with his feet r
09 He then placesVW074 his feet against the patient'
10 the desk in front of the man and putsVW074 his feet on each shoulder of th
11 e and sitsVW073 on the table and putsVW074 both his feet on the patient's
12 g hysterically in the chair, and putsVW074 his feet on the man's shoulders
13 able in front of his patient and putVW074 his feet on the man's chest and
14 said I'll use more leverage, and placedVW074 his feet on the patient's che
20 The doctor then putsVW074 his feet on either side of the
22 He then putsVW074 his feet on the man's chest and
23 To solve this, he putsVW074 his feet against the patient's

VF075 1

12 The doctor leansVW075 over the table, grabsVW076 a t

VF076 1

12 octor leansVW075 over the table, grabsVW076 a tooth with the pliers, and p

VF077 8

09 st the patient's upper chest and pullsVW077 with all his might on the pati
10 He yanksVW077 on a tooth and goes flyingVW07
12 076 a tooth with the pliers, and pullsVW077
13 eet on the man's chest and began pullingVW077 the tooth
14 He pulledVW077, the tooth cameVW078 out, put
15 belief while the laughing doctor pullsVW077 an upper front and slightly to
22 his feet on the man's chest and pullsVW077 hard
23 patient's shoulder and tries to pullVW077 his tooth again

VF078 7

02 ttempt, the tooth is sucessfully extractedVW078, but the wrong tooth was p
12 The tooth givesVW078 way sendingVW079 the doctor fl
13 The tooth gaveVW078 way and he fellVW079 back on th
14 He pulledVW077, the tooth cameVW078 out, puttingVW079 the doctor ba
20 he patients head and proceeds to pullVW078 the tooth out
22 The tooth popsVW078 out and the Dr fallsVW079 backw
23 e is successful this time but he pullsVW078 the wrong tooth

VF079 8

09 He tumblesVW079 away with the tooth lodged i
10 e yanksVW077 on a tooth and goes flyingVW079 backwards from the force of p
11 e he is successful and they both fallVW079 to the floor laughing uncontrol
12 The tooth givesVW078 way sendingVW079 the doctor flying backwards
13 The tooth gaveVW078 way and he fellVW079 back on the table and then scra
14 dVW077, the tooth cameVW078 out, puttingVW079 the doctor backwards over th
20 r the tooth is pulled the doctor fallsVW079 to the floor laughing

22 e tooth popsVW078 out and the Dr fallsVW079 backwards off the desk onto th

VF080 5

10 When the doctor liftsVW080 himself off the floor his face
12 The doctor emergesVW080 laughing, his nose now notic
13 VW079 back on the table and then scrambledVW080 to his feet
14 The doctor gotVW080 up, his face particularly his no
20 As he getsVW080 up, the man in the chair says t

VF081 1

12 ng, now missing one front tooth, pointsVW081 to the doctor's face

VF083 2

11 re still laughing and the doctor picksVW083 up a mirror, and rearrangesVW0
12 The doctor fumblesVW083 for a mirror and looksVW084

VF084 6

09 The doctor proceeds to lookVW084 in a mirror and finds that his
10 The doctor looksVW084 in a mirror and pushesVW085 th
12 or fumblesVW083 for a mirror and looksVW084 at his face which sends him in
13 Clouseau then lookedVW084 in a mirror - laughing uncont
14 Laughing, the doctor lookedVW084 in a mirror, and proceeded to
20 The doctor then looksVW084 in a mirror and sees it too

VF085 8

09 s arrificial nose is melting and fixesVW085 it
10 octor looksVW084 in a mirror and pushesVW085 the nose back together so tha
11 ctor picksVW083 up a mirror, and rearrangesVW085 his drooping face, at whi
12 the disguising facial putty and mouldsVW085 his nose to look pig like
13 He then pushedVW085 his nosetip back in place and
14 84 in a mirror, and proceeded to squishVW085 his melted features back onto
20 Stil laughing he pushesVW085 the fake skin back on his fac
22 The Dr attempts to fixVW085 it

VF086 1

11 rooping face, at which they both fallVW086 again to the floor laughing

VF087 11

01 Then another guy runsVW087 in and yells Clouseau is still
09 At this point, a third man comes bargingVW087 into the room to find out wh

10 oing that another man, in white, entersVW087 the room and pushesVW089 the
11 an, another servant maybe, comes runningVW087 into the room and knocksVW08
12 At that moment, Harry bargesVW087 into the room knockingVW090 t
13 he same time one of the servants ranVW087 into the room and informed the l
14 At this point another man ranVW087 in, hittingVW089 Harry and spill
15 A man rushesVW087 in at this point, knockingVW0
20 Next in runsVW087 another servant who tells the m
22 the man with a toothache, comes runningVW087 in, knockingVW089 over the b
23 At this moment, another man rushesVW087 in to the patient and says to

VF088 2

10 ushesVW089 the servant aside and runsVW088 towards the man seeing if he's
14 The man rushedVW088 to the patient's side and sai

VF089 5

10 white, entersVW087 the room and pushesVW089 the servant aside and runsVW0
11 s runningVW087 into the room and knocksVW089 over the other servant
14 s point another man ranVW087 in, hittingVW089 Harry and spillingVW090 his
15 an rushesVW087 in at this point, knockingVW089 over the servant in his hur
22 oothache, comes runningVW087 in, knockingVW089 over the butler and says th

VF090 2

12 Harry bargesVW087 into the room knockingVW090 the water out of the onlook
14 VW087 in, hittingVW089 Harry and spillingVW090 his water

VF095 3

11 The patient looksVW095 in a mirror and discovers that
12 the toothless laughing man says peeringVW095 into a hand mirror at his mi
22 down his laughter long enough to lookVW095 in a mirror

VF096 2

20 chair says he knew it all along, pointsVW096 to the doctor and says He's K
23 He then pointsVW096 to the dentist and shouts Kil

VF098 3

01 ill laughing like crazy, makes a runVW098 for it
10 The doctor runsVW098 off to the side of the room
11 hing, but the doctor gets up and runsVW098 to a nearby door

VF099 6

02 The dentist ranVW099 out of the room with two other m

10 the impersonation as the doctor runsVW099 out a back door
12 ggering, his makeup all smeared, escapesVW099 through a doorway Harry hot
15 Clouseau is seen edgingVW099 out the door, and the servant
22 The Dr runsVW099 out of the room and closesVW100
23 The dentist then runsVW099 through two large wooden doors

VF100 2

11 rvants to kill him as the doctor closesVW100 the door behind himself
22 Dr runsVW099 out of the room and closesVW100 2 large doors

VF101 4

02 t of the room with two other men chasingVW101 after him
15 nd the servant and the other man rushVW101 out after him to the patient's
20 The servants then chaseVW101 Kluzo out of the door
22 2 men runVW101 after him and into the doors

APPENDIX B

Obligatory Elaborations

APPENDIX B: OBLIGATORY ELABORATIONS

WITHOUT SOUNDTRACK (X)	WITH SOUNDTRACK (W)
1. Dentist ride up to castle.	1. Drawbridge lower.
2. Drawbridge lower.	2. Drawbridge raise.
3. Dentist raise the club.	3. Dentist enter.
4. Dentist fall down stairs.	4. Dentist raise the club.
5. Dentist breathe.	5. Denist fall down stairs.
6. Dentist give to patient.	6. Dentist sniff.
7. Dentist place feet on man's shoulders.	7. Dentist give patient gas.
8. Dentist remove tooth.	8. Dentist try to pull tooth.
9. Dentist fall.	9. Dentist place feet on man's shoulders.
10. Servant rush into room/through door.	10. Servant rush in.

APPENDIX C

Instructions

Background Data

Verbal/Visual Questionnaire

INSTRUCTIONS

('With Sound Track' Condition)

This is a study about how people use language to describe what they experience. You will be asked to watch a video sequence twice. The sequence is approximately 10 minutes long. Once you have finished viewing the video, you will be asked to describe what happened in the video in the booklet provided. This is not a memory test - however, please include as much information as you are able. Your written description will later be given to another person who has not viewed the videotape. This person will then be asked to give a description of the videotape based enitrely on your written description. Therefore, please describe what happened as clearly as possible. this is not to be a critique of acting, camera angles, or production values.

INSTRUCTIONS

('Without Sound Track' Condition)

This is a study about how people use language to describe what they experience. You will be asked to watch a video sequence twice. The sequence is approximately 10 minutes long and you will view it without sound. Once you have finished viewing the video, you will be asked to describe what happened in the video in the booklet provided. This is not a memory test - however, please include as much information as you are able. Your written description will later be given to another person who has not viewed the videotape. This person will then be asked to give a description of the videotape based enitrely on your written description. Therefore, please describe what happened as clearly as possible. this is not to be a critique of acting, camera angles, or production values.

BACKGROUND INFORMATION

All information on this sheet is for statistical purposes only. Although your anonymity will be protected, you are under no obligation to fill out any portion. Thank you for your cooperation.

NAME: _____

AGE: _____ SEX: _____

UNIVERSITY LEVEL: 1 2 3 4 5+ Masters Ph.D. Other (circle one)

MAJOR: _____ MINOR: _____

OTHER EDUCATION: _____

LINGUISTICS COURSES TAKEN: _____

IS ENGLISH YOUR NATIVE (FIRST) LANGUAGE? _____

IF NOT, WHAT IS? _____

PLEASE LIST, IN ORDER OF PROFICIENCY. ALL OF THE LANGUAGE YOU SPEAK: _____

INDIVIDUAL DIFFERENCES QUESTIONNAIRE

Instructions: Please indicate, for each of the items given, whether you 'agree' (A) or 'disagree' (D) that the item is generally characterisitc of you or your opinions. There is a 'not sure' (NS) response that can be used if you really cannot decide, but please avoid its use as much as possible.

	A	NS	D
1. I am fluent at writing essays and reports.	___	___	___
2. I am a good story teller.	___	___	___
3. I often use mental pictures to solve problems.	___	___	___
4. I am generally aware of sentence structure.	___	___	___
5. I consider myself to be a fast reader.	___	___	___
6. Memorizing by verbal repetition is time consuming and inefficient.	___	___	___
7. I have difficulty expressing myself in writing.	___	___	___
8. By using mental pictures of the elements of a problem, I am often able to arrive at a solution.	___	___	___
9. Studying the use and meaning of words has become a habit with me.	___	___	___
10. I read rather slowly.	___	___	___
11. I am able to express my thoughts clearly.	___	___	___
12. I have found it easy to learn a second language.	___	___	___
13. Essay writing is difficult for me.	___	___	___
14. I often have difficulty in explaining my thoughts to others.	___	___	___
15. I can form mental pictures to almost any word.	___	___	___
16. It bothers me when I see a word used improperly.	___	___	___

	A	NS	D
17. I read a great deal.	___	___	___
18. I memorize material largely by the use of verbal repetition.	___	___	___
19. My knowledge and use of grammar needs much improvement.	___	___	___
20. I am worse at telling jokes and stories than most people.	___	___	___
21. Most people think in terms of mental pictures whether they are completely aware of it or not.	___	___	___
22. I generally express myself with precision and accuracy in both verbal and written work.	___	___	___
23. I have a large vocabulary.	___	___	___
24. I have never done well in learning languages.	___	___	___
25. It is difficult for me to find synonyms or alternatives for a word when writing.	___	___	___
26. I often have ideas that I have trouble expressing in words.	___	___	___
27. Listening to someone recount his experience does not usually arouse mental images for me.	___	___	___
28. I would rather work with ideas than words.	___	___	___
29. I enjoy visual arts such as paintings rather than reading.	___	___	___
30. I can easily think of synonyms for words.	___	___	___
31. I have no difficulty in expressing myself verbally	___	___	___
32. My dreams are extremely vivid.	___	___	___
33. I speak or write what comes into my head without worrying much about my choice of words.	___	___	___
34. My marks have been hampered by inefficient reading.	___	___	___
35. I have better than average fluency in using words.	___	___	___
36. I am good at thinking up puns.	___	___	___

	A	NS	D
37. I am disturbed by people who quibble about word usage.	___	___	___
38. I spend very little time trying to improve my vocabulary.	___	___	___
39. I enjoy doing work that requires the use of words	___	___	___
40. I am usually able to say what I mean in my first draft of an essay or letter.	___	___	___
41. When I hear or read a word, a stream of other words often comes to mind.	___	___	___
42. The proper use of words is secondary to the ideas or contents of speech or writing.	___	___	___
43. I have difficulty producing associations for words.	___	___	___
44. My powers of imagination are higher than others.	___	___	___
45. I find that I am more critical of writing style than content of speech or writing.	___	___	___
46. My daydreams are often very vivid.	___	___	___

Name: _____ Subject No. _____